WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC

Energy Exploration in Partnership with the Environment

January 18, 2008

Mr. Gil Hunt
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Applications for Permits to Drill - Wolverine Gas and Oil Company of Utah, LLC
Wolverine Federal 19-2, Wolverine Federal 20-4, Wolverine Federal 20-2, Wolverine State 20-3, and Wolverine State 17-10
Covenant Field, D Pad, NE/4 NW/4, Section 20, T23S, R1W, SLB&M
Sevier County, Utah

Dear Mr. Hunt:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) hereby submits two copies of an *Application for Permit to Drill* (APD) for each of the five referenced wells. These five wells will be directionally drilled from the same pad, referred to as D Pad in the Covenant Field. Included with these APDs is the following supplemental information:

- R649-3-2 Exception Plat for the Wolverine Federal 19-2;
- R649-3-11 Directional Drilling Application Plat for each well;
- BLM Surface Use Plan of Operations;
- Survey Plat for each well;
- Drilling Plan, BOPE Diagram, and Directional Plan for each well;
- Location Layout and Pad Cross-Sections for each well;
- Vicinity Map showing Land Administration for each well.

Kings Meadow Ranches, LLC (User Number 63-2529) will be the source for water during drilling and completion operations on this proposed well. The surface at the planned drill site is administered by the Bureau of Land Management.

The proposed Wolverine Federal 19-2 well is located within 460' of a drilling unit boundary, so a request for exception to spacing (R649-3-2) is hereby requested for the well based on geology and restrictive topography. Wolverine is the only owner and operator within 460' of the proposed well location.

One Riverfront Plaza • 55 Campau, N.W. • Grand Rapids, MI 49503-2616 • 616.458.1150 • FAX 616.458.0869

This letter and the accompanying plats are also intended to serve as an application for directionally drilling the five proposed D Pad wells per R649-3-11. Wolverine is the owner of all oil and gas within 460 feet from all points along the intended wellbore for each of the five wells. Information relating to R649-3-11 is as follows:

Operator: Wolverine Gas and Oil Company of Utah, LLC

Address: One Riverfront Plaza
55 Campau, N.W.
Grand Rapids, MI 49503-2616

Wells: Wolverine Federal 19-2, Wolverine Federal 20-4, Wolverine Federal 20-2, Wolverine State 20-3, and Wolverine State 17-10

Field: Covenant

Reservoir: Navajo

County: Sevier

Reason: Inaccessible terrain and to minimize surface impact.

Please accept this letter as Wolverine's written request for confidential treatment of all information contained in and pertaining to this application and proposed wells.

Thank you for consideration of this application. Please feel free to contact myself or Ed Higuera of this office if you have any questions or need additional information.

Sincerely,

Ellis M. Peterson
Senior Production Engineer
Wolverine Gas and Oil

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: ST UT ML-46605	6. SURFACE: Federal
1A. TYPE OF WORK: DRILL ☑ REENTER ☐ DEEPEN ☐	7. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
B. TYPE OF WELL: OIL ☑ GAS ☐ OTHER _____ SINGLE ZONE ☑ MULTIPLE ZONE ☐	8. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC	9. WELL NAME and NUMBER: Wolverine State 17-10
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616 PHONE NUMBER: (616) 458-1150	10. FIELD AND POOL, OR WILDCAT: Covenant Field Navajo 492
4. LOCATION OF WELL (FOOTAGES) 418977X 4294205Y 38.794743 -111.933033 AT SURFACE: 193' FNL, 2136' FWL, NE/4 NW/4, Section 20 AT PROPOSED PRODUCING ZONE: 596' FSL, 2017' FEL, SW/4 SE/4, Section 17 419193X 4294454Y 38.797008 -111.930514	11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 01W S
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 4 miles SE of Sigurd, Utah	12. COUNTY: Sevier / 13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): 443	16. NUMBER OF ACRES IN LEASE: 1880 / 17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40 acres
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): 2800	19. PROPOSED DEPTH: 6,830 / 20. BOND DESCRIPTION: Blanket Surety B001849
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5866' GL, 5892' KB	22. APPROXIMATE DATE WORK WILL START: 5/15/2008 / 23. ESTIMATED DURATION: 40 days

24. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
30"	24" Conduct	80	Ready Mix			
12.25"	9.625" J-55 36.0	2,025	CBM Lite	225 sks	4.12	10.5
			Premium Plus	275 sks	1.19	15.6
8.75"	7" HCL-80 23.0, 26.0	6,830	Elastiseal, N2 foamed	400 sks		10.0
			Elastiseal, non-foam	125 sks	14.35	1.45

RECEIVED
JAN 25 2008
DIV OF OIL, GAS & MINING

25. ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
- ☑ COMPLETE DRILLING PLAN
- ☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Edward A. Higuera TITLE Manager - Development

SIGNATURE Edward A. Higuera DATE 1/18/2008

(This space for State use only)

API NUMBER ASSIGNED: 43-041-30054

Approved by the
Utah Division of
Oil, Gas and Mining

APPROVAL:

Date: 02-13-08

By:

(See Instructions on Reverse Side)

(11/2001)

Federal Approval of this Action is Necessary

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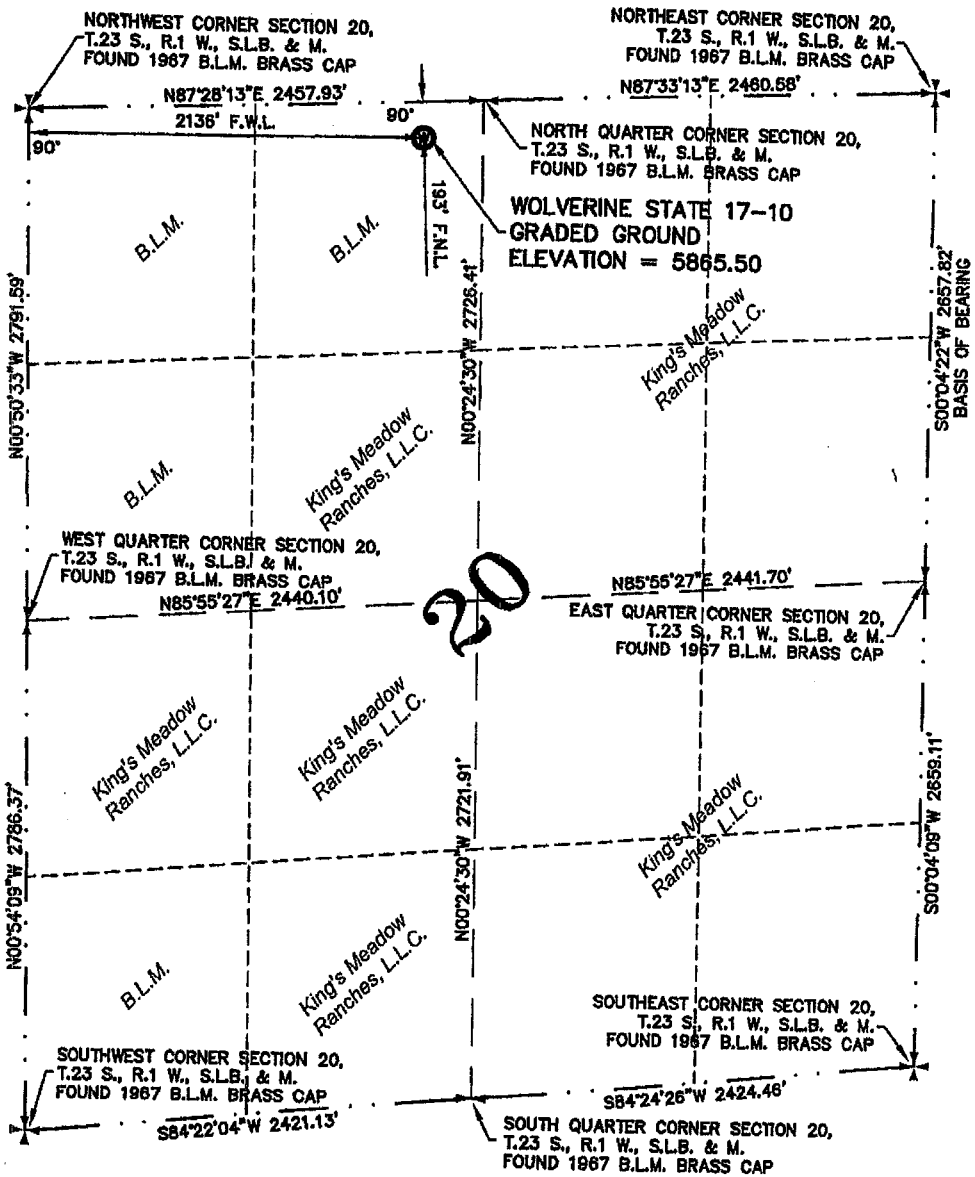
Section 20, T.23 S., R.1 W., S.L.B. & M.



BASIS OF BEARINGS

BASIS OF BEARING USED WAS S00°04'22"W BETWEEN THE NORTHEAST CORNER AND THE EAST QUARTER CORNER OF SECTION 20, T.23 S., R.1 W., S.L.B. & M.
WELL COORDINATES: LATITUDE: 38°47'40.9886" (38.794719056) NAD 83
LONGITUDE: -111°58'01.9915" (-111.933886528) NAD 83

PROJECT

Wolverine Gas & Oil Company of Utah, L.L.C.

WELL LOCATION, LOCATED AS SHOWN IN THE N.E. 1/4 OF THE N.W. 1/4 OF SECTION 20, T.23 S., R.1 W., S.L.B. & M. SEVIER COUNTY, UTAH

LEGEND

= SECTION CORNERS (LOCATED)
= QUARTER SECTION CORNERS (LOCATED)
= PROPOSED WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE WOLVERINE STATE 17-10 WELL LOCATION. LOCATED IN THE N.E. 1/4 OF THE N.W. 1/4 OF SECTION 20, T.23 S., R.1 W., S.L.B. & M., SEVIER COUNTY, UTAH.

BASIS OF ELEVATION

ELEVATION BASED ON THE U.S.G.S. BENCH MARK T-30 LOCATED IN THE S.W. 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.

1000' 500' 0' 1000'
SCALE

CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR TREVOR ROY GADD No. 343639 STATE OF UTAH

01/16/08

TREVOR R. GADD P.L.S. # 343639

Jones & DeMille Engineering
1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266
Fax (435) 896-8268
www.jonesanddemille.com

Well Location Plat for

Wolverine Gas & Oil Company of Utah, L.L.C.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
-	K.D.B.	T.R.G.	T.W.G.	0703-201	1
DATE 01/08/08		DWG.NAME WELL_LOC	SCALE 1"=1000'		

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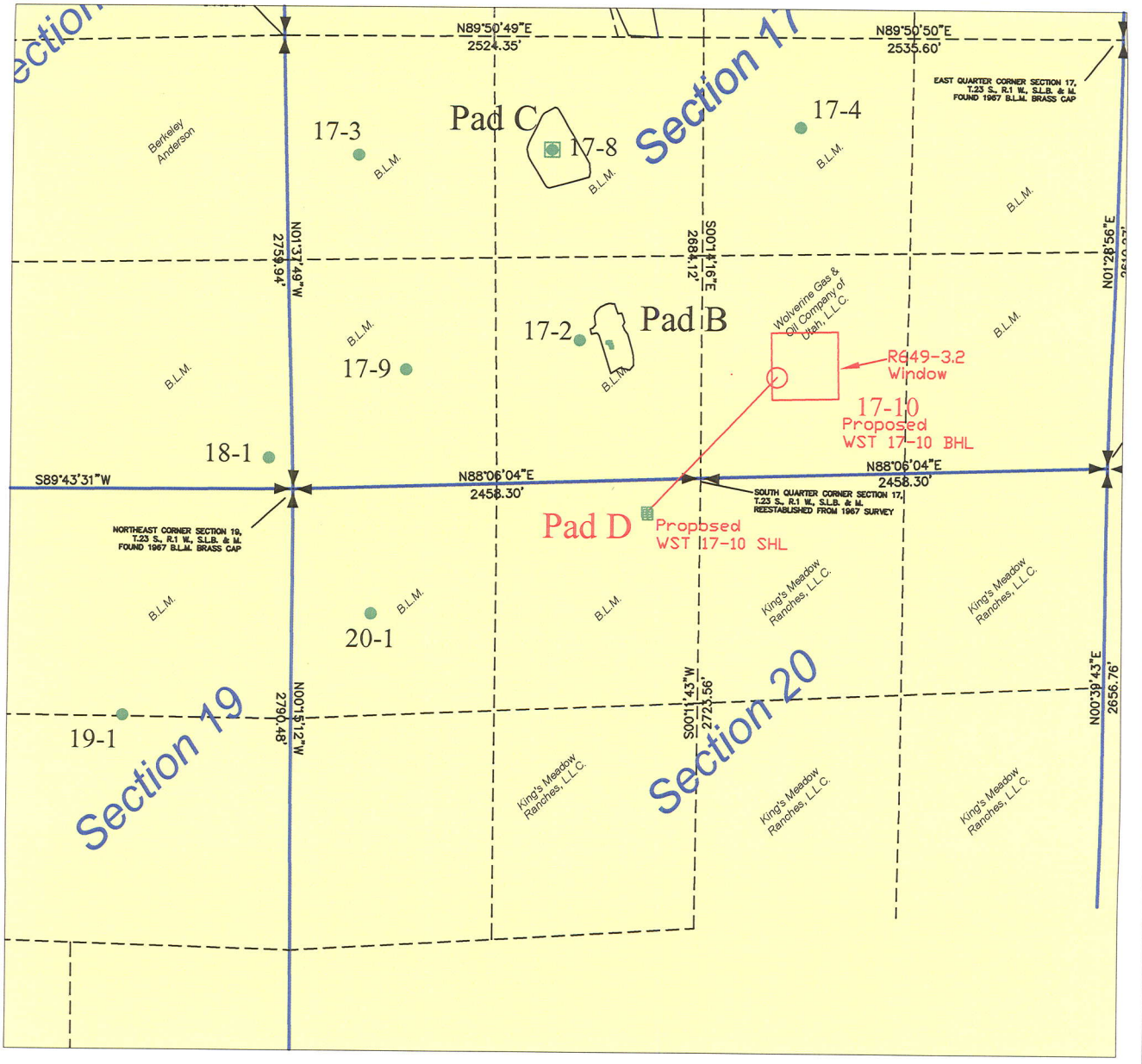

Wolverine State 17-10 Well Location

SHL: 193' FNL, 2136' FWL, NE1/4 NW1/4 Sec. 20 T23S R1W

BHL: 596' FSL, 2017' FEL, SW1/4 SE1/4 Sec. 17 T23S R1W

Wolverine Lease

Wolverine Gas and Oil Corporation
Energy Exploration in Partnership with the Environment
One Riverfront Plaza
55 Campau N.W.
Grand Rapids, MI 49503-2616
(616) 458-1150

Directional Drilling Application Plat (R649-3-11)
T23S, R1W
Sevier County, UT

SCALE: 1:12,000	FNAME: covenant_field.dwg		
DATE: 01/08/2008		SHEET	REV

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PLAN

Wolverine State 17-10
NE/4 NW/4 Section 20, Township 23 South, Range 1 West, S.L.B & M.
Sevier County, Utah

Plan Summary:

It is planned to drill this confidential development well as a directional bore hole due to surface topography constraints and in accordance with the enclosed directional drilling plan. The well will be drilled to a measured depth of 6830' (6700' TVD) to test the upper thrust of the Twin Creek and Navajo formations. Well path deviation caused by subsurface geologic irregularities is expected to be the primary drilling concern in this area. No abnormal pressure is anticipated.

The planned location is as follows:

Surface Location:	193' FNL, 2136' FWL, Section 20, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ Navajo 1 target	596' FSL, 2017' FEL, Section 17, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ total depth	596' FSL, 2017' FEL, Section 17, T23S, R1W, S.L.B. & M.

Conductor casing will be set at approximately 80 feet and cemented to surface. A 12-1/4" hole will be drilled vertically to approximately 1000' and then deviated at 2 degrees per 100' build rate to 14 degrees hole angle at 2025' (2000' TVD) at which time 9-5/8" surface casing will be set and cemented to surface. An 8-3/4" hole will be drilled at approximately 14 degrees from vertical to approximately 5700' MD and then allowed to drop to vertical to penetrate the Twin Creek and Navajo formations to a well total depth of 6830' (6700' TVD). The well will be logged and 7" production casing will be set and cemented to 1500' (9-5/8" csg shoe @ 2025').

Drilling activities at this well are expected to commence in June 2008.

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Well Name: **Wolverine State 17-10**

Surface Location: 193' FNL, 2136' FWL
NE/4 NW/4 Section 20, T23S, R1W, S.L.B. & M.
Sevier County, Utah

TD Bottom-Hole Location: 596' FSL, 2017' FEL; Sec 17, T23S, R1W, S.L.B. & M

Elevations (est): 5866' GL, 5892' KB

I. Geology:

Tops of important geologic markers and anticipated water, oil, gas, and mineral content are as follows:

Formation	TVD Interval (KB)	MD Interval (KB)	Contents	Pressure Gradient
Arapien	26' – 5961'	26' – 6089'		
Twin Creek 1	5961' – 6291'	5989' – 6420'	Oil & water	0.46 psi/ft
Navajo 1	6291' –6700'	6420' – 6830'	Oil & water	0.46 psi/ft
Total Depth	6700'	6830'		

II. Well Control:

The contracted drilling rig has a 10M BOP system but conditions only require a 5M BOP system. BOPE will be in place and tested as a 5M system prior to drilling out the surface casing shoe. See attached schematic of BOPE.

A. The BOPE will, as a minimum, include the following:

Wellhead Equipment (5M Min.):

BOPE Item	Flange Size and Rating
Annular Preventer	13-5/8" 5M
Double Rams (5" Pipe - top, Blind - bottom)	13-5/8" 10M
Drilling Spool w/ 2 side outlets (4" Choke Line, 4" Kill Line)	13-5/8" 10M x 13-5/8" 10M
Single Ram (Pipe)	13-5/8" 10M
DSA	13-5/8" 10M x 11" – 5M
Casing Head (9-5/8" SOW w/ two 2-1/16" SSO's)	11" 5M

Auxiliary Equipment (5M Min.):

BOPE Item
Choke Line with 2 valves (3" minimum)
Kill Line with 2 valves and one check valve (2" Minimum)
2 Chokes with one remotely controlled at a location readily accessible to the driller
Upper and lower kelly cock valves with handles
Safety Valves to fit all drill string connections in use
Inside BOP or float sub
Pressure gauge on choke manifold
Fill-up line above the uppermost preventer
Wear bushing in casing head

B. **Choke manifold** will be functionally equipped and sized at a minimum as shown on the attached diagram. All choke lines will be straight lines unless turns have tee blocks or are targeted with running tees, and all choke lines will be anchored. All valves (except chokes) in the kill line choke manifold and choke line will be full opening and allow straight through flow.

C. **System accumulator** will have sufficient capacity to open the hydraulically-controlled gate valve and close all rams plus the annular preventer (3 ram system will have added 50 percent safety factor to compensate for any fluid loss in the control system or preventers) and retain a minimum pressure of 200 psi above pre-charge on the closing manifold without use of the closing unit pumps. The fluid reservoir capacity shall be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir shall be maintained at the manufacturer's recommendations. The accumulator will have two (2) independent power sources available to close the preventers. Nitrogen bottles may be one of those sources, and if so, will have charge maintained per manufacturer's specifications.

D. **Accumulator pre-charge pressure test** will be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum specified limits. Only nitrogen gas will be used to precharge.

E. **Power for the closing unit pumps** will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure has decreased to the pre-set level.

F. **Accumulator pump capacity** will be such that, with the accumulator system isolated from service, the pumps will be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and retaining a minimum of 200 psi above the specified accumulator pre-charge pressure.

G. **Locking devices**, either manual (i.e., hand wheels) or automatic, will be installed on the ram type preventers. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.

H. **Remote controls** will be readily accessible to the driller and will be capable of both opening and closing all preventers. Master controls shall be at the accumulator and shall be capable of opening and closing all preventers and the choke line valve.

I. **Well control equipment testing** will be performed using clear water when the equipment is initially installed, whenever any seal subject to test pressure is broken, following related repairs, and as a minimum, every 30-day interval. The tests will apply to all related well control equipment.

Ram type preventers and associated equipment will be isolated and tested to 5000 psi. The annular preventer will be tested to 2500 psi. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer, for all tests. A casing head valve will be open below the test plug during testing of the BOP stack. Valves will be tested from the working pressure side with all down-stream valves open. Kill line valves will be tested with the check valve held open or the ball removed.

Pipe and blind rams will be activated each trip, but not more than once a day. The annular preventers will be functionally operated at least weekly. A pit level drill will be conducted weekly for each crew. All BOPE drills and tests will be recorded in the IADC driller's log.

III. Casing and Cementing:

A. Casing Program (all new casing):

Hole Size	Casing Size	Weight	Grade	Connection	Coupling Diameter	Setting Depth
30"	24"		Conductor			80' GL
12.25"	9.625"	36.0	J55	STC	10.625"	2025' kb
8.750"	7.000"	26.0	HCL-80	LTC	7.656"	TD-4000'kb
	7.000"	23.0	HCL-80	LTC	7.656"	4000'- surf

	Surface	Intermediate	Production
Casing O. D. (in)	9.625	None	7.0
Casing Grade	J-55		HCL-80
Weight of Pipe (lbs/ft)	36.0		23 & 26
Connection	STC		LTC
Top Setting Depth - MD (ft)	0		0
Top Setting Depth - TVD (ft)	0		0
Bottom Setting Depth - MD (ft)	2025		6830
Bottom Setting Depth - TVD (ft)	2000		6700
Maximum Mud Weight - Inside (ppg)	9.2		8.4
Maximum Mud Weight - Outside (ppg)	9.2		10.5
Design Cement Top - MD (ft)	0		1500
Design Cement Top - TVD (ft)	0		1500
Max. Hydrostatic Inside w/ Dry Outside (psi)	957		2927
Casing Burst Rating (psi)	3520		7240
Burst Safety Factor (1.10 Minimum)	**3.68**		**2.47**
Max. Hydrostatic Outside w/ Dry Inside (psi)	957		3658
Collapse Rating	2020		6830
Collapse Safety Factor (1.125 Minimum)	**2.11**		**1.87**
Casing Weight in Air (kips)	72.9		165.6
Body Yield (kips)	564.0		532.0
Joint Strength (kips)	453.0		435.0
Tension Safety Factor (1.80 Minimum)	**6.21**		**2.63**

Casing with same or greater burst, collapse, and tension rating may be substituted for any of the planned casing sizes depending on availability and actual conditions.

B. Cementing Program

Casing Size	Cement Slurry	Quantity (sks)	Density (ppg)	Yield (ft^3/sk)
9.625"	Lead: CBM Lite	225	10.5	4.12
	Tail: Premium Plus	275	15.6	1.19
7.000"	Lead: Elastiseal™ N2 foamed	400	10.0	NA
	Tail: Elastiseal™ non-foamed	125	14.35	1.45

1,55 rises to 1500' gauge hole

Surface: 9-5/8" surface casing will be cemented from setting depth (2025' MD) to surface and topped out with premium cement if necessary. Hardware will include a guide shoe, float collar, top plug, and a minimum of one centralizer per joint on the bottom three (3) casing joints. Water or other preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Intermediate: none

Production: 7" production casing will be cemented in one stage from setting depth (6830') to 1500' (at least 500' into the 9-5/8" casing) using a foamed cement lead and non-foamed tail across the producing interval. A minimum of 20 percent silica will be added to the cement slurry if bottom-hole temperature exceeds 230 °F. Slurry volume will be based on calipered hole size plus 20% excess. Hardware will include a guide shoe, float collar, top plug, and centralizers as needed across any pay zones. Water and preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Other: - The BLM will be notified at least twenty-four hours prior to running and cementing the surface and production casing strings.

- Actual cement slurries for all casing will be based on final service company recommendations.

- The size, weight, grade, type of thread, number of joints, and footage of all casing run will be recorded in the driller's log. The amount and type of all cement pumped will be recorded in the driller's log.

- Adequate time will be allowed before drilling out for the cement at the casing shoe to achieve a minimum 500-psi compressive strength.

- All casing strings will be tested to 1500 psi before drilling out and if pressure declines by more than 10 percent in 30 minutes, corrective action will be taken.

- Before drilling more than 20 feet of new hole below each casing string, a pressure integrity test of the casing shoe will be performed to a minimum of the mud weight equivalent anticipated to control the pore pressure to the next casing depth or at total depth of the well.

IV. Mud Program:

Depth	Mud Weight (ppg)	Mud Type	Viscosity	Fluid Loss
0 – 2025'	8.4 – 9.2	Fresh Water	26 – 50	N/C to 12 cc
2025' – 6830'	9.2 – 10.5	Salt Mud	36 – 50	N/C to 8 cc

A. After mudding up, slow pump rates will be taken daily and recorded in the driller's log.

B. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume.

C. Abnormal pressures are not anticipated. In the event such pressures are to be anticipated, electronic/mechanical mud monitoring equipment will be in place and include as a minimum; pit volume totalizer (PVT); stroke counter; and flow sensor.

D. A mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

E. The 10M BOPE system is not required for conditions on this well and use of the trip tank is not anticipated.

F. Gas detecting equipment will be installed in the mud return system, and hydrocarbon gas shall be monitored for pore pressure changes. The presence of Hydrogen Sulfide gas is not expected.

G. The need to vent combustible or noncombustible gas is not expected. If needed, a flare system designed to gather and burn all gas will be available. The flare line discharge will be located more than 100 feet from the well head and it will be positioned downwind of the prevailing wind direction. The flare line will have straight lines unless turns are targeted with running tees and it will be anchored. The flare system will have an effective method for ignition.

H. Abnormal pressure is not expected. If abnormal pressure is to be anticipated, a mud-gas separator (gas buster) will be installed and operable beginning at a point at least 500 feet above any anticipated hydrocarbon zone of interest.

V. Evaluation:

A. Mud Log: A mud logging unit will be in operation from a depth of approximately 2025 feet to TD. Samples will be caught, cleaned, bagged, and marked as required.

B. Drill Stem Tests: There are no DST planned.

C. Coring: There are no cores planned.

D. Wireline Logs: Wireline logs will be run as hole conditions allow from total depth to surface casing to assist in determining lithology and potential for hydrocarbon recovery. The logging tools will at a minimum survey resistivity, gamma radiation, and sonic velocity.

VI. Expected Bottom-Hole Pressure and Abnormal Conditions:

A. Hydrogen Sulfide: Hydrogen Sulfide (H_2S) gas is not expected in the geologic formations to be penetrated by this well.

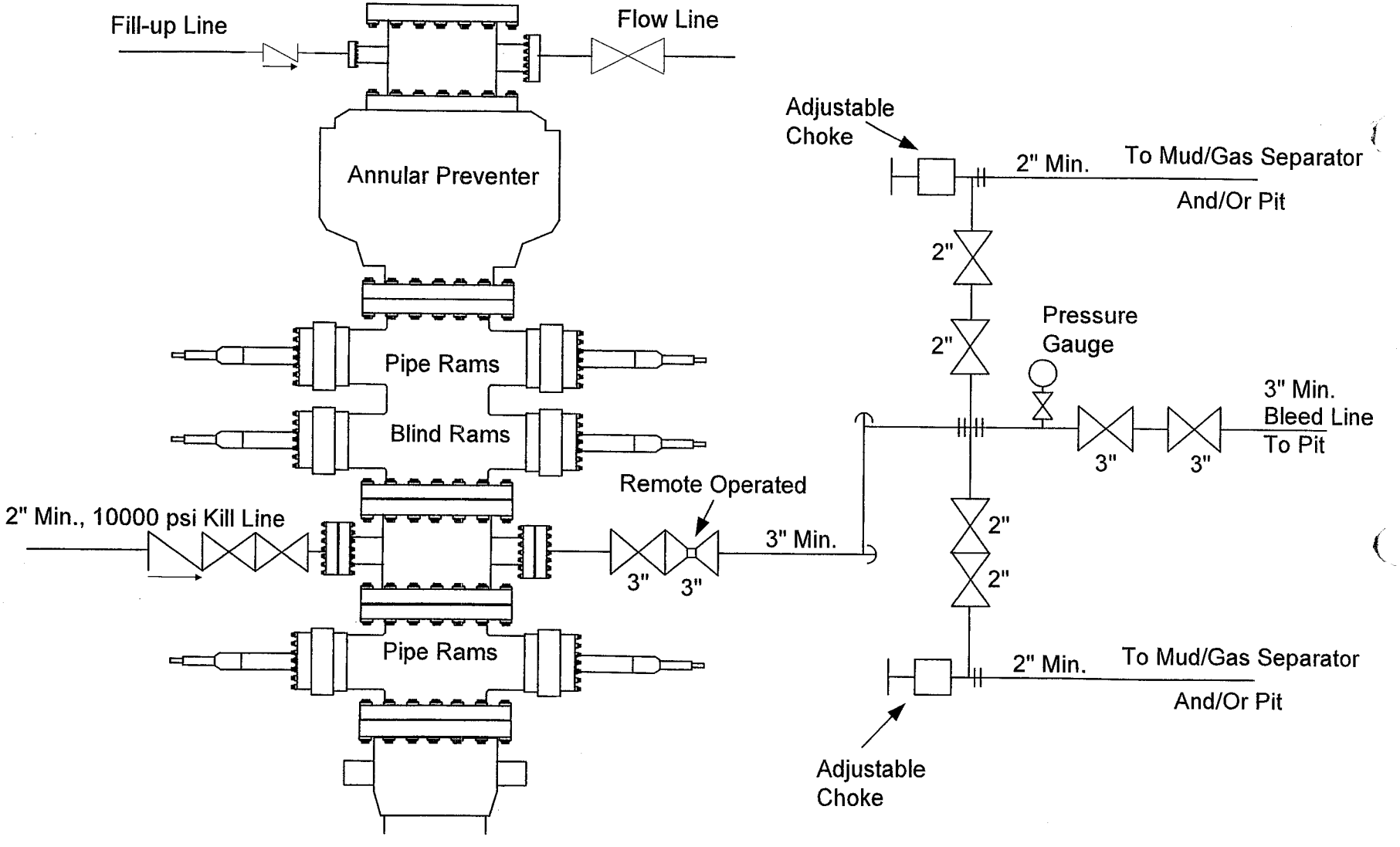
B. Pressure: No abnormally pressured zones are expected in this well. The pressure gradient for all potentially productive formations is expected to be approximately 0.46 psi/ft.

C. Temperature: Bottom-hole temperature at TD is expected to be approximately 190 °F.

end

Wolverine Gas and Oil Company of Utah, LLC
Covenant Field D1 Pad Well
BOPE Schematic

(Not to Scale)



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SURFACE USE PLAN OF OPERATIONS

EXHIBIT A *to Application for Permit to Drill*

Name of Operator: Wolverine Gas and Oil Company of Utah, LLC
Address: One Riverfront Plaza, 55 Campau NW
Grand Rapids, Michigan, 49503-2616

Well Location(s): -Below five wells directionally drilled from one drill pad (D Pad)

Wolverine State 17-10
193' FNL & 2136' FWL, Section 20, T23S, R1W, SLB&M
BHL in SW/4 SE/4 Section 17-T23S-R1W
Sevier County, Utah

Wolverine Federal 19-2
255' FNL & 2155' FWL, Section 20, T23S, R1W, SLB&M
BHL in NE/4 SE/4 Section 19-T23S-R1W
Sevier County, Utah

Wolverine Federal 20-2
239' FNL & 2150 FWL, Section 20, T23S, R1W, SLB&M
BHL in SW/4 NW/4 Section 20, T23S, R1W
Sevier County, Utah

Wolverine State 20-3
224' FNL & 2145 FWL, Section 20, T23S, R1W, SLB&M
BHL in SE/4 NW/4 Section 20, T23S, R1W
Sevier County, Utah

Wolverine Federal 20-4
208' FNL & 2141 FWL, Section 20, T23S, R1W, SLB&M
BHL in NE/4 NW/4 Section 20, T23S, R1W
Sevier County, Utah

Access Road Location: Across BLM land in NE/4 NW4 Section 20, T23S, R1W, SLB&M from new driveway off SR 24.

State surface use is not required for construction and drilling of the referenced wells. BLM is the surface owner at the drill pad site. Federal surface use is being requested with the associated Application for Permit to Drill (APD) through the BLM – Richfield Field Office.

The dirt contractor will be provided with an approved copy of the surface use plan of operations and conditions of approval before initiating construction.

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Existing Roads:
The vicinity maps attached to the APDs show the proposed well pad location and its proximity to the town of Sigurd, Utah. From Sigurd, travel south on SR 24 approximately 5 miles to the proposed well pad access driveway located on west side of highway.

Access Roads to be Constructed and Reconstructed:
A new driveway will be constructed, approximately 200 feet in length, as shown on the attached drawings. Width of ramp at highway is 100 feet, narrowing to a maintained road width of 30 feet.

Location of Existing Wells:
All wells located within a one-mile radius of the proposed wells are listed below:

Well	Type	Surface Location *	Bottom Hole Location *
KMR 17-1	Producer-oil	SE4NW4 Section 17	SE4NW4 Section 17
WF 17-2	Producer-oil	SE4SW4 Section 17	SE4SW4 Section 17
WF 17-3	Producer-oil	SE4NW4 Section 17	SW4NW4 Section 17
WF 17-4	Producer-oil	SE4NW4 Section 17	NW4SE4 Section 17
WF 17-5	Producer-oil	SE4NW4 Section 17	SE4NE4 Section 17
WF 17-6	Producer-oil	SE4NW4 Section 17	NW4NE4 Section 17
KMR 17-7	Producer-oil	SE4NW4 Section 17	NW4SW4 Section 17
WF 17-8	Being Completing-oil	NE4SW4 Section 17	NE4SW4 Section 17
WF 17-9	Producer-oil	NE4SW4 Section 17	SW4SW4 Section 17
WF 18-1	Producer-oil	SE4SW4 Section 17	SE4SE4 Section 18
WF 19-1	Producer-oil	SE4SW4 Section 17	NE4NE4 Section 19
WF 20-1	Producer-oil	SE4SW4 Section 17	NW4NW4 Section 20
WF 8-1	Dry Hole-plugged	SE4NW4 Section 17	SE4SE4 Section 8
SWD-1	Disposal-active	SW4SW4 Section 8	SW4SW4 Section 8
Water well	Culinary water supply	SW4NE4 Section 20	SW4NE4 Section 20

*All wells are located in T23S-R1W

Location of Planned Wells:
Planned wells that have approval to be drilled and will be located within a one-mile radius of the proposed wells are listed below:

Well	Type	Surface Location *	Bottom Hole Location *
WF 17-11	Producer-oil	SE4NW4 Section 17	SE4NE4 Section 17
WF 17-12	Producer-oil	SE4NW4 Section 17	SW4NE4 Section 17
WF 17-13	Producer-oil	SE4NW4 Section 17	SW4NE4 Section 17

Location of Existing and/or Proposed Facilities if Well is Productive:
(a) On well pad – No production facilities are planned for the proposed well pad. A temporary testing facility may be constructed on this location and if so it will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery location.
(b) Off well pad – Produced oil and fluids from the proposed wells will be transported by underground pipelines northerly across BLM land, across the existing B Pad, and continuing northerly to the valve set recently installed on the existing C Pad. This action will be proposed in the future by Sundry Notice.

Location and Type of Water Supply (Rivers, Creeks, Lakes, Ponds and Wells):
The Operator intends to lease water rights from Kings Meadow Ranches, LLC (Water Right #63-2529), which was the supply for drilling the other Covenant Field wells. Source of water is Kings

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Meadow Reservoir. Water will be piped to the reserve pit from the nearest irrigation riser, as directed by Kings Meadow Ranches. Should additional water sources be pursued they will be properly permitted through the State of Utah – Division of Water Rights. The BLM will be notified of any changes in water supply.

Construction Materials:
Natural earth materials used for fill on the well pad will be taken from cuts made in the perimeter of the pad. Imported granular borrow from an approved source will be applied to the surface of the well pad.

Methods for Handling Waste Disposal:
The reserve pit will be used for the disposal of waste mud and drill cuttings. All borehole fluids and salts will be contained in the reserve pit. It has been located in cut material and will be lined with 12 mil minimum thickness plastic nylon reinforced liner material. The liner will overlay a felt liner pad only if sharp rock edges result from excavation. The pit liner will overlap the top of the pit walls and be covered with dirt and/or rocks to hold it in place. No trash, scrap pipe, etc. that could puncture the liner will be disposed of in the pit. Pit walls will be sloped no greater than 2:1. A minimum 2-foot freeboard will be maintained in the pit at all times during the drilling and completion operations. After evaporation of fluids, back-fill of sub-soil and compaction to prevent settling will occur within 90 days of cessation of pit use. If necessary, any remaining fluids will be pumped out of the pit and transported off site to an approved disposal facility.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of the well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of the well.

Wastewater will not be discharged on the surface at this site and the drilling of the wells will not require a wastewater management plan.

Produced fluids from the wells other than water will be stored in a test tank until such time as hookup to production facilities can be made. Any spills of oil, gas, salt water or other fluids will be cleaned up and removed.

All rubbish and debris will be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling operations and as needed during such operations. There will be no chemical disposal of any type.

Self-contained, portable toilets will be used for human waste, and the waste will be disposed at an approved human waste disposal facility. Sanitation will comply with local and state regulations.

Ancillary Facilities:
No ancillary facilities are anticipated.

Well Site Layout:
The Location Layout Drawings attached to the APD show the proposed wells' surface locations in relation to the pad layout, which includes location of the reserve pit and access road onto the pad, turnaround areas, parking areas, office facilities, soil material stockpiles, and the orientation of the rig with respect to the pad and other facilities. Pad Section Sheets in said attachment show cuts and fills

required for construction, and their relationship to topography. As detailed above under Methods for Handling Waste Disposal, the reserve pit will be lined and appropriate measures as described above will be taken to prevent leakage. The pit will be fenced on three sides during drilling operations and then the fourth side will be immediately fenced when the rig is moved off location.

The pad design is consistent with BLM specifications.

A pre-construction meeting with responsible company representative and contractors will be conducted at the project site prior to commencement of surface-disturbing activities. The pad will be construction-staked prior to this meeting.

All surface disturbing activities will be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

All cut and fill slopes will be such that stability can be maintained for the life of the activity.

Diversion ditches will be constructed as shown around the well pad to prevent surface waters from entering the well site area. The site surface will be graded to drain away from the pit to avoid pit spillage during large storm events.

The stockpiled topsoil (first 6 inches or maximum available) will be stored on the west side of the northwest pad corner. All topsoil will be stockpiled for reclamation in such a way as to prevent soil loss and contamination.

Plans for Reclamation of the Surface:
Interim Reclamation: After production is established from successful wells as expected, the Operator will perform interim reclamation of the site. Interim reclamation will consist of reclamation of the reserve pit and reclamation of that portion of the well pad not needed for ongoing operations. After evaporation of fluids, the pit will be back-filled with sub-soil and/or rock and compacted to prevent settling. The pit area will be surfaced with granular borrow to render it a usable part of the well pad. All portions of the pad no longer necessary for well workover, testing or treating will be contoured to match the surrounding terrain to the best extent practicable, and seeded as prescribed by the BLM.
Final Reclamation: At such time that all production ceases from the proposed wells and the wells have been plugged and abandoned, the Operator will perform final reclamation of the site. Final reclamation will consist of replacing spoil into the cut areas in a manner that will return the impacted area to its original contour and condition, to the greatest extent practicable, and blending same with undisturbed land to establish a natural-looking contour. All disturbed land will be seeded per BLM requirements.
During the life of the project and until the site is released from liability for reclamation, the project will be inspected at least annually for noxious weeds. If invasive noxious weeds are found, the weeds will be treated to eliminate further reproduction, and treatment shall continue until the weeds have been eradicated. If noxious weeds are found, the BLM will be notified of their occurrence.

Surface Ownership:
The surface of the well pad and access road is owned by BLM.

Other Information:
Western Land Services has conducted a Class III archeological survey and will submit the report under separate cover to the appropriate agencies.

Western Land Services is preparing an EA for the proposed D Pad that will be submitted under separate cover.

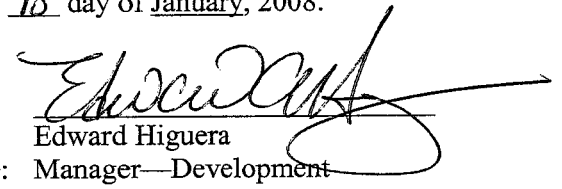
No stream alteration or drainage crossings are involved that require additional State or Federal approval.

All permanent structures constructed or installed will be painted to match the Covenant Facilities, which is painted non-reflective Carlsbad Cavern Tan, unless otherwise directed by the AO. All facilities will be painted within six months of installation. Facilities that are required to comply with Occupational Safety and Health Act (OSHA) shall be excluded.

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I, or someone under my direct supervision, have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 18 day of January, 2008.

Signature: 
Edward Higuera
Position Title: Manager—Development

Address: Wolverine Gas and Oil Company of Utah, LLC
One Riverfront Plaza, 55 Campau, NW
Grand Rapids, Michigan, 49503-2616

Telephone: 616-458-1150

Field representative (if not above signatory):

Paul Spiering
Address: 1140 N Centennial Park Drive
Richfield, Utah 84701

Telephone: 435-896-1943

Agents not directly employed by the operator must submit a letter from the operator authorizing that agent to act or file this application on their behalf.

WOLVERINE GAS & OIL COMPANY

Location: UTAH
Field: SEVIER COUNTY
Facility: SEC.20-T23S-R1W

Slot: Wolverine State 17-10 193'FNL & 2136'FWL
Well: Wolverine State 17-10
Wellbore: Wolverine State 17-10 PWB

Plot reference wellpath is Wolverine State 17-10 PWP	
True vertical depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), US feet
Measured depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	North Reference: True north
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level: 5891 feet	Scale: True distance
Mean Sea Level to Mud line (Facility - SEC.20-T23S-R1W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: Suzanne Thompson on 1/7/2008

Location Information

Facility Name			Grid East (USft)	Grid North (USft)	Latitude	Longitude
SEC.20-T23S-R1W			1516740.440	6730025.867	38° 47' 40.989"N	111° 56' 01.992"W
Slot	**Local N (ft)**	**Local E (ft)**	**Grid East (USft)**	**Grid North (USft)**	**Latitude**	**Longitude**
Wolverine State 17-10 193'FNL & 2136'FWL	-0.00	0.00	1516740.440	6730025.867	38° 47' 40.989"N	111° 56' 01.992"W

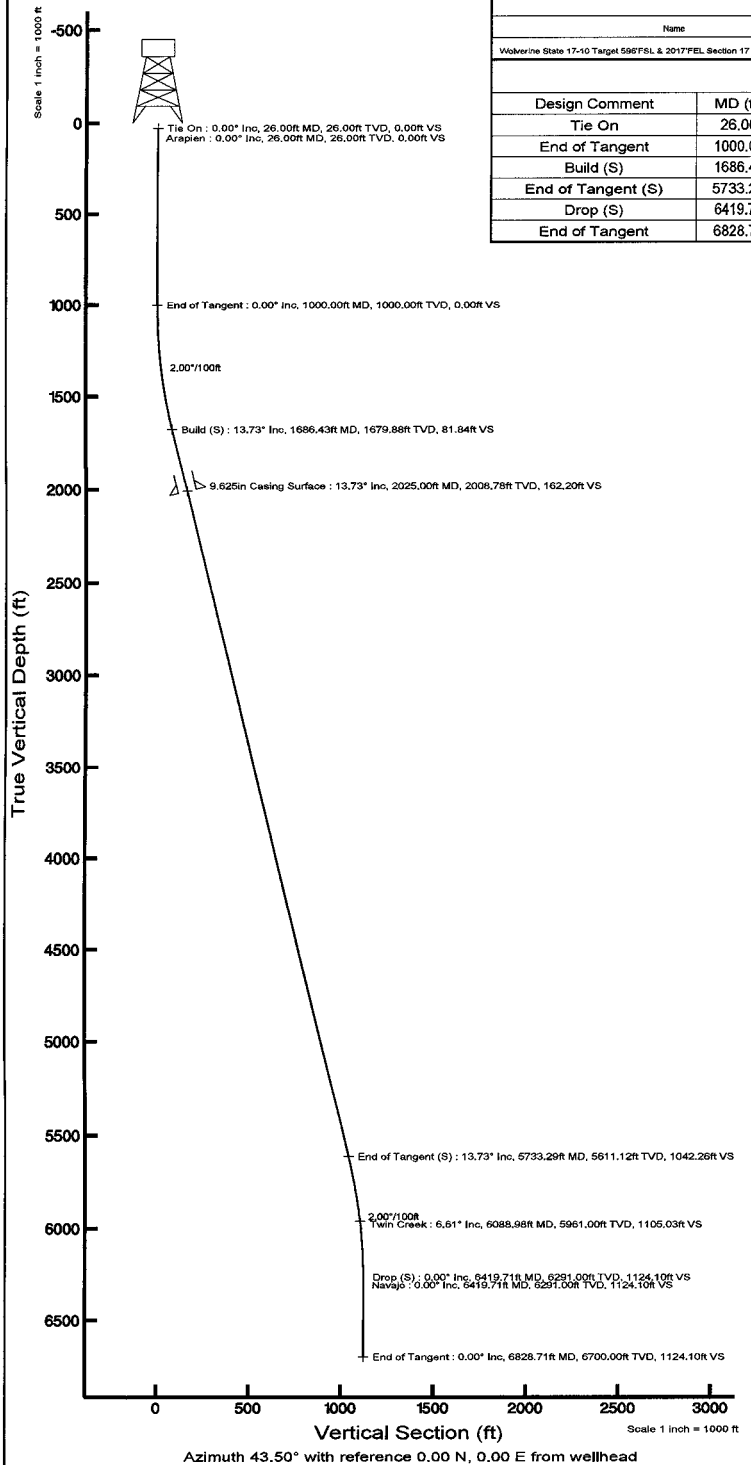
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mud line (Facility - SEC.20-T23S-R1W)	5891ft
Mean Sea Level to Mud line (Facility - SEC.20-T23S-R1W)	0ft
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level	5891ft

Targets

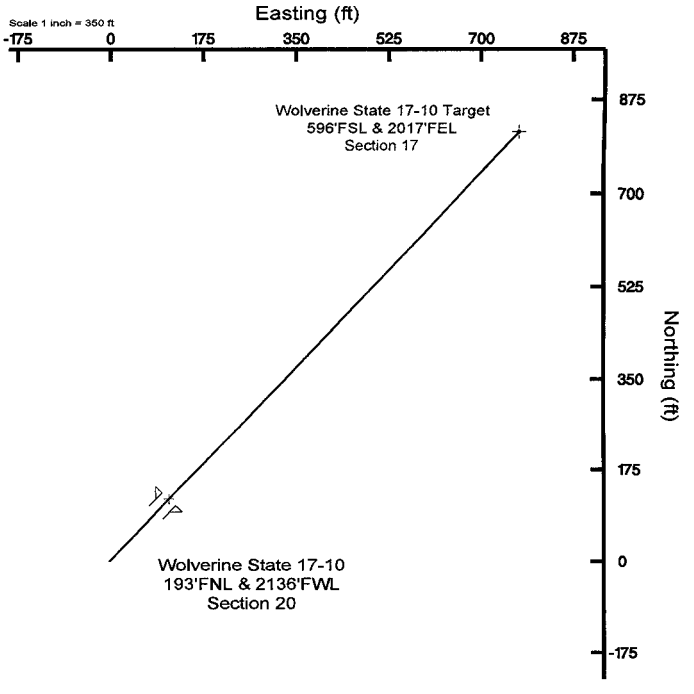
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
Wolverine State 17-10 Target 596'FSL & 2017'FEL Section 17	6419.71	6291.00	815.39	773.78	1517518.21	6730837.55	38° 47' 49.046"N	111° 55' 52.218"W

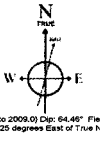
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	43.500	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	43.500	1000.00	0.00	0.00	0.00	0.00
Build (S)	1686.43	13.729	43.500	1679.88	59.37	56.34	2.00	81.84
End of Tangent (S)	5733.29	13.729	43.500	5611.12	756.03	717.44	0.00	1042.26
Drop (S)	6419.71	0.000	43.500	6291.00	815.39	773.78	2.00	1124.10
End of Tangent	6828.71	0.000	43.500	6700.00	815.39	773.78	0.00	1124.10



Azimuth 43.50° with reference 0.00 N, 0.00 E from wellhead





BGGM (1945.0 to 2009.0) Dip: 64.46° Field: 51664 nT
Magnetic North is 12.25 degrees East of True North (at 01/04/08)

To correct azimuth from Magnetic to True add 12.25 degrees

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Planned Wellpath Report

Wolverine State 17-10 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine State 17-10 193'FNL & 2136'FWL**
Area	**UTAH**	Well	**Wolverine State 17-10**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine State 17-10 PWB**
Facility	**SEC.20-T23S-R1W**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / Lambert Utah State Planes, Central Zone (4302), US feet**	Software System	**WellArchitect™ 1.2**
North Reference	**True**	User	**Suzanne Thompson**
Scale	**1.00006**	Report Generated	**01/07/08** at **15:55:13**
Wellbore last revised	**01/04/08**	Database/Source file	**WA_Denver/Wolverine_St**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	-0.00	0.00	1516740.44	6730025.87	**38 47 40.989N**	**111 56 01.992W**
Facility Reference Pt			1516740.44	6730025.87	**38 47 40.989N**	**111 56 01.992W**
Field Reference Pt			1516134.37	6732217.32	**38 48 02.619N**	**111 56 09.781W**

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Facility Vertical Datum	**5891.00**
Horizontal Reference Pt	**Slot**	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level	**5891.00**
Vertical Reference Pt	**Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00 fe**
MD Reference Pt	**Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)**	Section Origin	**N 0.00,**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**43.50°**

Planned Wellpath Report

Wolverine State 17-10 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (75 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
0.00†	0.000	43.500	0.00	0.00	0.00	0.00	0.00
26.00	0.000	43.500	26.00	0.00	0.00	0.00	0.00
126.00†	0.000	0.000	126.00	0.00	0.00	0.00	0.00
226.00†	0.000	0.000	226.00	0.00	0.00	0.00	0.00
326.00†	0.000	0.000	326.00	0.00	0.00	0.00	0.00
426.00†	0.000	0.000	426.00	0.00	0.00	0.00	0.00
526.00†	0.000	0.000	526.00	0.00	0.00	0.00	0.00
626.00†	0.000	0.000	626.00	0.00	0.00	0.00	0.00
726.00†	0.000	0.000	726.00	0.00	0.00	0.00	0.00
826.00†	0.000	0.000	826.00	0.00	0.00	0.00	0.00
926.00†	0.000	0.000	926.00	0.00	0.00	0.00	0.00
1000.00	0.000	43.500	1000.00	0.00	0.00	0.00	0.00
1026.00†	0.520	43.500	1026.00	0.12	0.09	0.08	2.00
1126.00†	2.520	43.500	1125.96	2.77	2.01	1.91	2.00
1226.00†	4.520	43.500	1225.77	8.91	6.46	6.13	2.00
1326.00†	6.520	43.500	1325.30	18.53	13.44	12.75	2.00
1426.00†	8.520	43.500	1424.43	31.62	22.93	21.76	2.00
1526.00†	10.520	43.500	1523.05	48.15	34.93	33.15	2.00
1626.00†	12.520	43.500	1621.03	68.12	49.42	46.89	2.00
1686.43	13.729	43.500	1679.88	81.84	59.37	56.34	2.00
1726.00†	13.729	43.500	1718.32	91.24	66.18	62.80	0.00
1826.00†	13.729	43.500	1815.46	114.97	83.39	79.14	0.00
1926.00†	13.729	43.500	1912.61	138.70	100.61	95.47	0.00
2026.00†	13.729	43.500	2009.75	162.43	117.82	111.81	0.00
2126.00†	13.729	43.500	2106.89	186.16	135.04	128.15	0.00
2226.00†	13.729	43.500	2204.04	209.90	152.25	144.48	0.00
2326.00†	13.729	43.500	2301.18	233.63	169.47	160.82	0.00
2426.00†	13.729	43.500	2398.32	257.36	186.68	177.16	0.00
2526.00†	13.729	43.500	2495.46	281.09	203.90	193.49	0.00
2626.00†	13.729	43.500	2592.61	304.83	221.11	209.83	0.00
2726.00†	13.729	43.500	2689.75	328.56	238.33	226.16	0.00
2826.00†	13.729	43.500	2786.89	352.29	255.54	242.50	0.00
2926.00†	13.729	43.500	2884.04	376.02	272.76	258.84	0.00
3026.00†	13.729	43.500	2981.18	399.76	289.97	275.17	0.00
3126.00†	13.729	43.500	3078.32	423.49	307.19	291.51	0.00
3226.00†	13.729	43.500	3175.47	447.22	324.40	307.85	0.00
3326.00†	13.729	43.500	3272.61	470.95	341.62	324.18	0.00
3426.00†	13.729	43.500	3369.75	494.68	358.83	340.52	0.00
3526.00†	13.729	43.500	3466.90	518.42	376.05	356.85	0.00
3626.00†	13.729	43.500	3564.04	542.15	393.26	373.19	0.00

Planned Wellpath Report

Wolverine State 17-10 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (75 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
3726.00†	13.729	43.500	3661.18	565.88	410.48	389.53	0.00
3826.00†	13.729	43.500	3758.32	589.61	427.69	405.86	0.00
3926.00†	13.729	43.500	3855.47	613.35	444.91	422.20	0.00
4026.00†	13.729	43.500	3952.61	637.08	462.12	438.54	0.00
4126.00†	13.729	43.500	4049.75	660.81	479.33	454.87	0.00
4226.00†	13.729	43.500	4146.90	684.54	496.55	471.21	0.00
4326.00†	13.729	43.500	4244.04	708.27	513.76	487.54	0.00
4426.00†	13.729	43.500	4341.18	732.01	530.98	503.88	0.00
4526.00†	13.729	43.500	4438.33	755.74	548.19	520.22	0.00
4626.00†	13.729	43.500	4535.47	779.47	565.41	536.55	0.00
4726.00†	13.729	43.500	4632.61	803.20	582.62	552.89	0.00
4826.00†	13.729	43.500	4729.76	826.94	599.84	569.23	0.00
4926.00†	13.729	43.500	4826.90	850.67	617.05	585.56	0.00
5026.00†	13.729	43.500	4924.04	874.40	634.27	601.90	0.00
5126.00†	13.729	43.500	5021.19	898.13	651.48	618.23	0.00
5226.00†	13.729	43.500	5118.33	921.87	668.70	634.57	0.00
5326.00†	13.729	43.500	5215.47	945.60	685.91	650.91	0.00
5426.00†	13.729	43.500	5312.61	969.33	703.13	667.24	0.00
5526.00†	13.729	43.500	5409.76	993.06	720.34	683.58	0.00
5626.00†	13.729	43.500	5506.90	1016.79	737.56	699.91	0.00
5726.00†	13.729	43.500	5604.04	1040.53	754.77	716.25	0.00
5733.29	13.729	43.500	5611.12	1042.26	756.03	717.44	0.00
5826.00†	11.874	43.500	5701.53	1062.80	770.93	731.58	2.00
5926.00†	9.874	43.500	5799.73	1081.66	784.61	744.57	2.00
6026.00†	7.874	43.500	5898.52	1097.09	795.80	755.19	2.00
6126.00†	5.874	43.500	5997.80	1109.06	804.48	763.42	2.00
6226.00†	3.874	43.500	6097.43	1117.55	810.64	769.27	2.00
6326.00†	1.874	43.500	6197.30	1122.57	814.28	772.72	2.00
6419.71	0.000	43.500	6291.00[1]	1124.10	815.39	773.78	2.00
6426.00†	0.000	0.000	6297.29	1124.10	815.39	773.78	0.00
6526.00†	0.000	0.000	6397.29	1124.10	815.39	773.78	0.00
6626.00†	0.000	0.000	6497.29	1124.10	815.39	773.78	0.00
6726.00†	0.000	0.000	6597.29	1124.10	815.39	773.78	0.00
6826.00†	0.000	0.000	6697.29	1124.10	815.39	773.78	0.00
6828.71	0.000	43.500	6700.00	1124.10	815.39	773.78	0.00

HOLE & CASING SECTIONS

Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP

String/Diameter	Start MD [feet]	End MD [feet]	Interval [feet]	Start TVD [feet]	End TVD [feet]	Start N/S [feet]	Start E/W [feet]	End N/S [feet]	End E/W [feet]
9.625in Casing Surface	26.00	2025.00	1999.00	26.00	2008.78	0.00	0.00	117.65	111.65

Planned Wellpath Report

Wolverine State 17-10 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine State 17-10 193'FNL & 2136'FWL**
Area	**UTAH**	Well	**Wolverine State 17-10**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine State 17-10 PWB**
Facility	**SEC.20-T23S-R1W**		

TARGETS

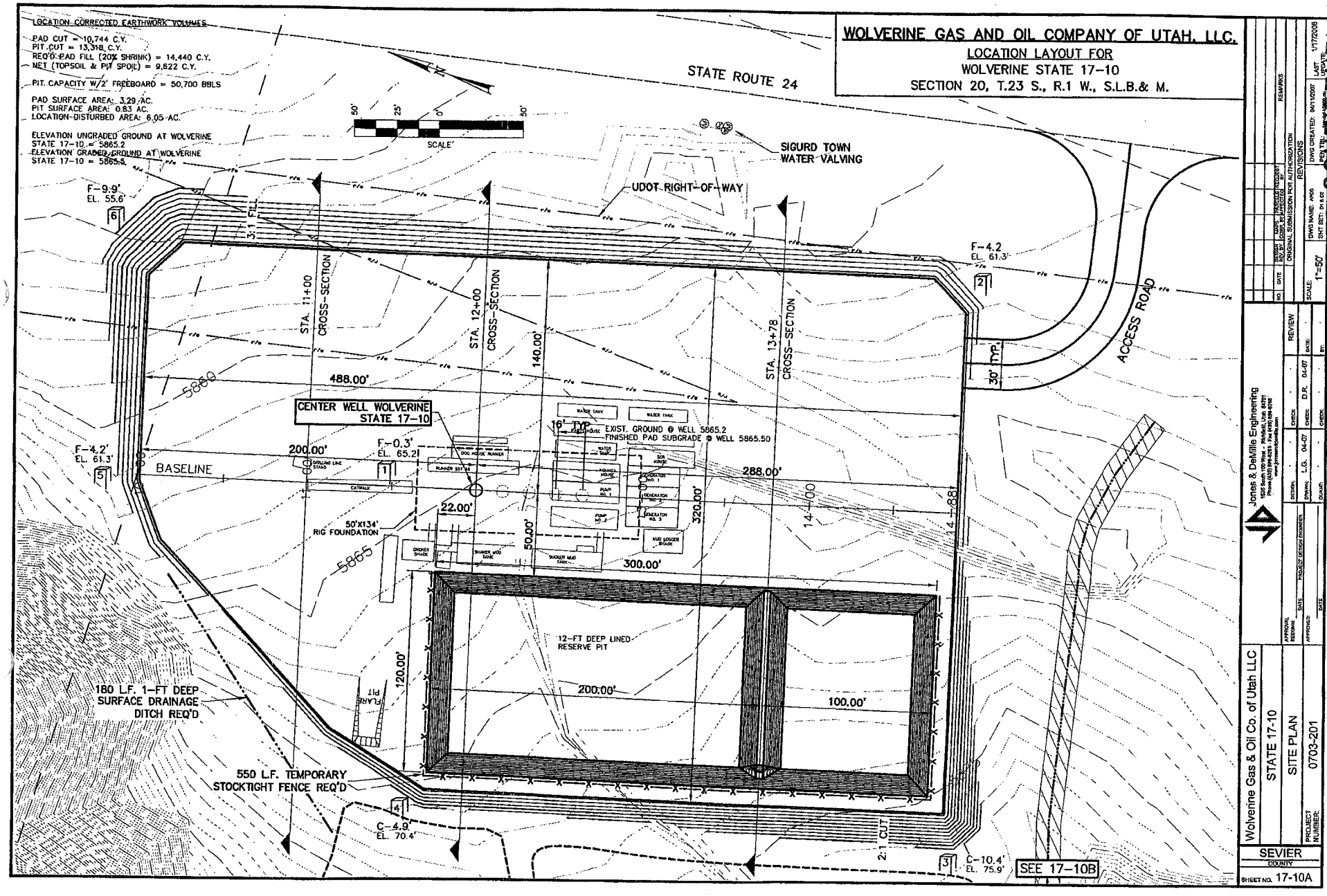
Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) Wolverine State 17-10 Target 596'FSL & 2017'FEL Section 17	6419.71	6291.00	815.39	773.78	1517518.21	6730837.55	38 47 49.048N	111 55 52.218W	point

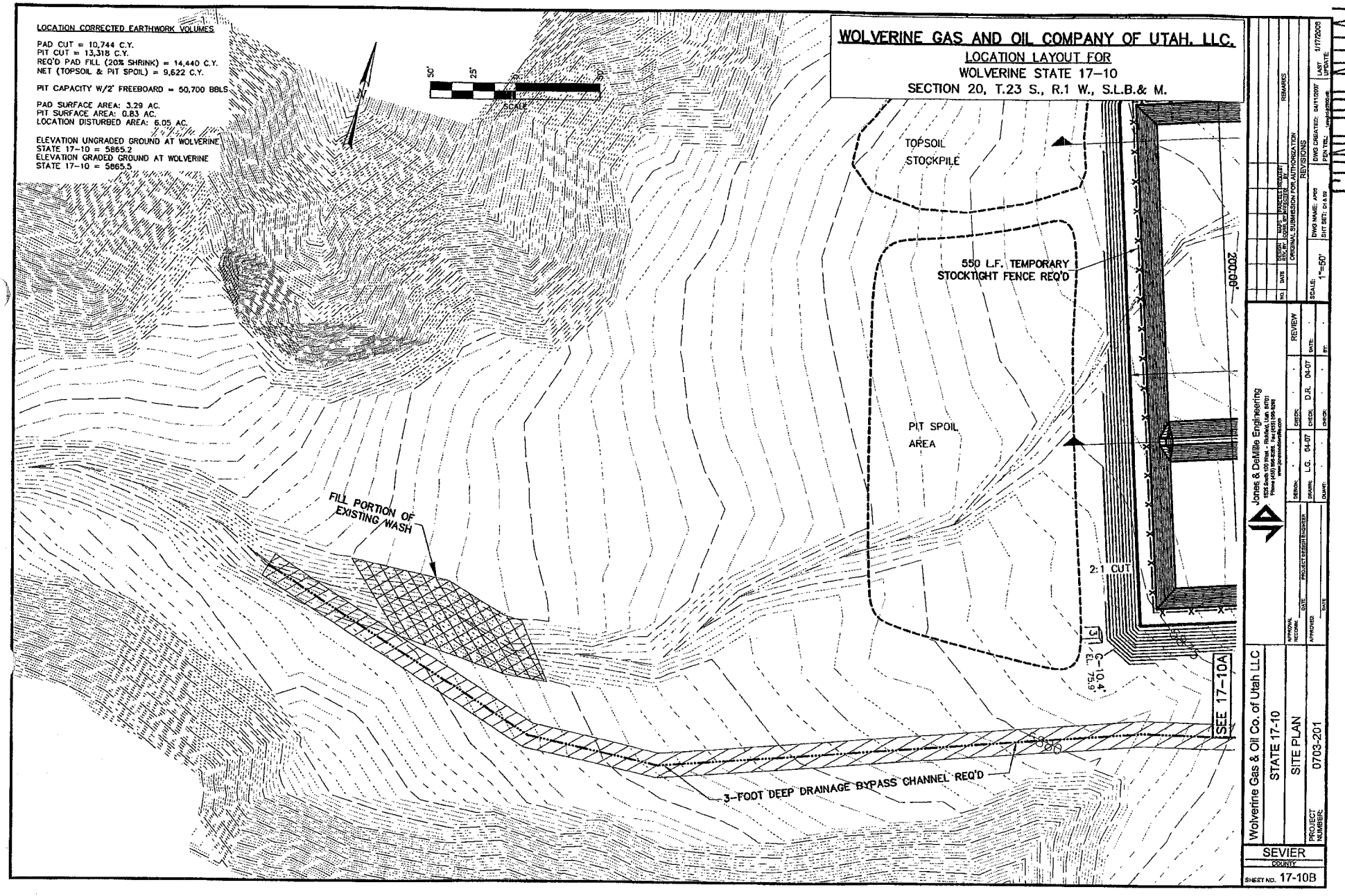
SURVEY PROGRAM Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	6828.71	MTC (Collar, pre-2000) (Standard)		Wolverine State 17-10 PWB

WELLPATH COMMENTS

MD [feet]	Inclination [degrees]	Azimuth [degrees]	TVD [feet]	Comment
26.00	0.000	43.500	26.00	Arapien
6088.98	6.615	43.500	5961.00	Twin Creek
6419.71	0.000	43.500	6291.00	Navajo


LOCATION CORRECTED EARTHWORK VOLUMES
PAD CUT = 10,744 C.Y.
PIT CUT = 13,318 C.Y.
REQ'D PAD FILL (20% SHRINK) = 14,440 C.Y.
NET (TOPSOIL & PIT SPOIL) = 9,622 C.Y.
PIT CAPACITY W/2' FREEBOARD = 50,700 BBLS
PAD SURFACE AREA: 3.29 AC.
PIT SURFACE AREA: 0.83 AC.
LOCATION-DISTURBED AREA: 6.05 AC.
ELEVATION UNGRADED GROUND AT WOLVERINE STATE 17-10 = 5865.2
ELEVATION GRADED GROUND AT WOLVERINE STATE 17-10 = 5865.5
WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.
LOCATION LAYOUT FOR
WOLVERINE STATE 17-10
SECTION 20, T.23 S., R.1 W., S.L.B.& M.
STATE ROUTE 24
SCALE
SIGURD TOWN WATER VALVING
UDOT RIGHT-OF-WAY
F-9.9'
EL. 55.6'
F-4.2
EL. 61.3'
ACCESS ROAD
30' TYP.
STA. 11+00 CROSS-SECTION
STA. 12+00 CROSS-SECTION
STA. 13+78 CROSS-SECTION
140.00'
488.00'
5860
CENTER WELL WOLVERINE STATE 17-10
16' DD
EXIST. GROUND @ WELL 5865.2
FINISHED PAD SUBGRADE @ WELL 5865.50
200.00'
F-0.3'
EL. 65.2'
F-4.2'
EL. 61.3'
BASELINE
288.00'
320.00'
14+88
14+00
22.00'
50'X134'
RIG FOUNDATION
50.00'
5865
300.00'
12-FT DEEP LINED RESERVE PIT
120.00'
200.00'
100.00'
180 L.F. 1-FT DEEP SURFACE DRAINAGE DITCH REQ'D
550 L.F. TEMPORARY STOCKTIGHT FENCE REQ'D
C-4.9'
EL. 70.4'
2:1 CUT
C-10.4'
EL. 75.9'
SEE 17-10B
CONFIDENTIAL
Jones & DeMille Engineering
Wolverine Gas & Oil Co. of Utah LLC
STATE 17-10
SITE PLAN
PROJECT NUMBER: 0703-201
SEVIER COUNTY
SHEET NO. 17-10A


LOCATION CORRECTED EARTHWORK VOLUMES
PAD CUT = 10,744 C.Y.
PIT CUT = 13,318 C.Y.
REQ'D PAD FILL (20% SHRINK) = 14,440 C.Y.
NET (TOPSOIL & PIT SPOIL) = 9,622 C.Y.
PIT CAPACITY W/2' FREEBOARD = 50,700 BBLS
PAD SURFACE AREA: 3.29 AC.
PIT SURFACE AREA: 0.83 AC.
LOCATION DISTURBED AREA: 6.05 AC.
ELEVATION UNGRADED GROUND AT WOLVERINE STATE 17-10 = 5865.2
ELEVATION GRADED GROUND AT WOLVERINE STATE 17-10 = 5865.5
N
50'
25'
0'
50'
SCALE
WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.
LOCATION LAYOUT FOR
WOLVERINE STATE 17-10
SECTION 20, T.23 S., R.1 W., S.L.B.& M.
TOPSOIL STOCKPILE
550 L.F. TEMPORARY STOCKTIGHT FENCE REQ'D
200.06'
PIT SPOIL AREA
FILL PORTION OF EXISTING WASH
2:1 CUT
3
C-10.4'
EL. 75.9'
SEE 17-10A
3-FOOT DEEP DRAINAGE BYPASS CHANNEL REQ'D
CONFIDENTIAL
REVISIONS
SCALE: 1"=50'
DWG NAME: APD
SHT SIZE: D
DWG CREATED: 04/11/2007
PEN TBL:
LAST UPDATE: 1/17/2008
Jones & DeMille Engineering
1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266 Fax (435) 896-8268
www.jonesanddemille.com
DESIGN: -
DRAWN: LG 04-07
QUANT: -
CHECK: -
CHECK: D.R. 04-07
CHECK: -
REVIEW
DATE: -
DATE: -
DATE: -
BY: -
APPROVAL RECOMM.
DATE
PROJECT ENGINEER
APPROVED:
DATE
Wolverine Gas & Oil Co. of Utah LLC
STATE 17-10
SITE PLAN
PROJECT NUMBER: 0703-201
SEVIER
COUNTY
SHEET NO. 17-10B

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

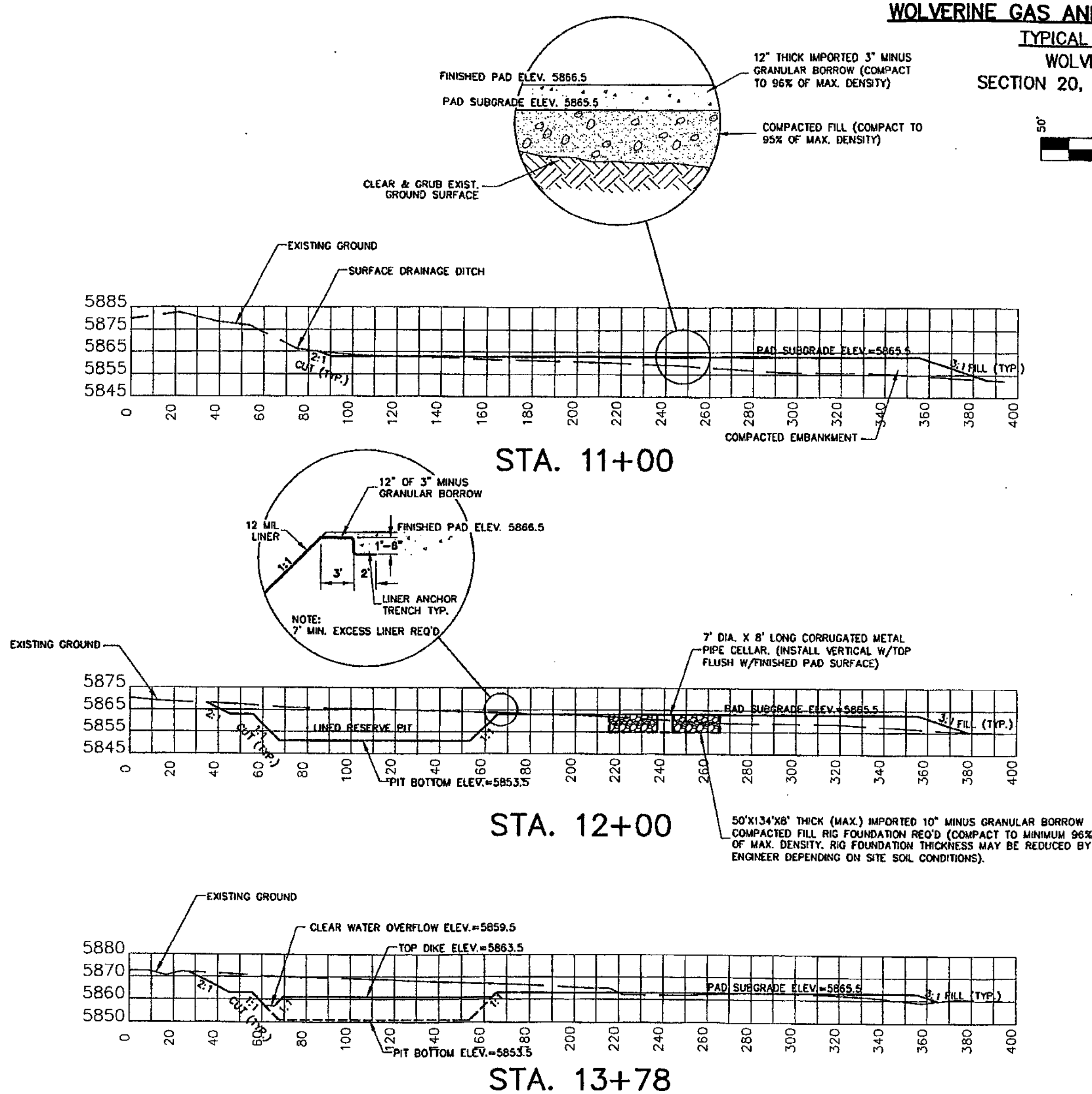
TYPICAL CROSS SECTIONS FOR

WOLVERINE STATE 17-10

SECTION 20, T.23 S., R.1 W., S.L.B.& M.

50' 25' 0' 50'

SCALE



REMARKS

ORIGINAL SUBMISSION FOR AUTHORIZATION

REVISIONS

DWG CREATED: 04/11/2007

LAST UPDATE: 1/17/2008

SCALE: 1"=50'

REVIEW

DRAWN: L.G. 04-07

CHECK: D.R. 04-07

Jones & DeMille Engineering

Wolverine Gas & Oil Co. of Utah LLC

STATE 17-10

CROSS SECTIONS

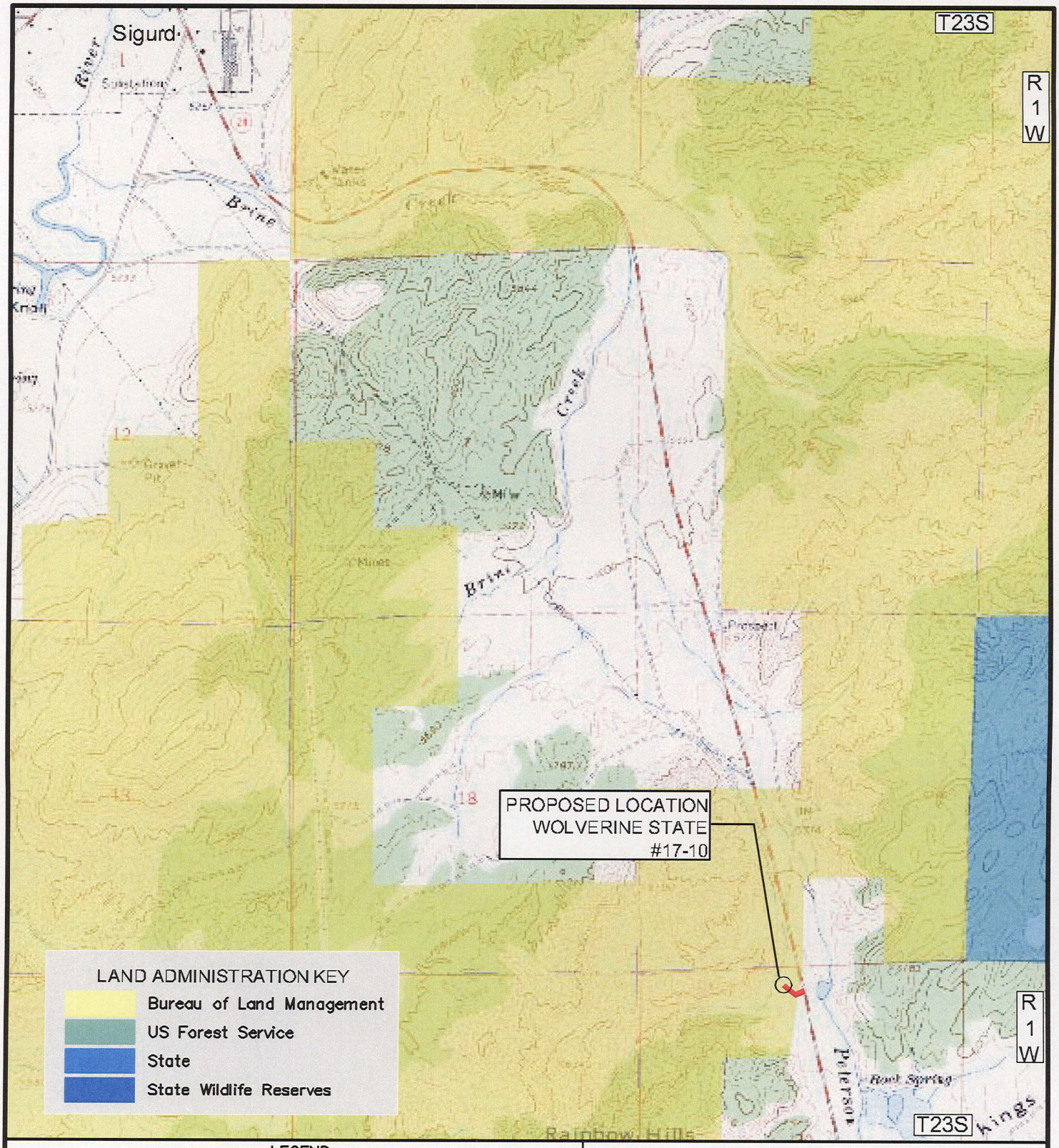
PROJECT NUMBER: 0703-201

SEVIER

COUNTY

SHEET NO. 17-10C

CONFIDENTIAL



LEGEND

- PROPOSED LOCATION
- EXISTING PRIVATE ROAD
- NEW ROADWAY
- EXISTING COUNTY ROAD NEEDING UPGRADE

Wolverine State #17-10
Section 20, T.23 S., R.1 W., S.L.B. & M.
2136' F.W.L. 193' F.N.L.

Jones & DeMille Engineering
1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266 Fax (435) 896-8268
www.jonesanddemille.com

SCALE: 1:2000

	Wolverine State 17-10		FIGURE:
	Vicinity Map		
	Wolverine Gas & Oil Company of Utah, LLC		
DRAWN: B.L. 01-08	PEN TBL: _1sIndrd-hp2600.ctb	PROJECT: 0703-201	SHEET: 17-10
CHECK: D.R. 01-08	FILE: VICINITY	LAST UPDATE: 1/17/2008	

CONFIDENTIAL

WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 01/25/2008

API NO. ASSIGNED: 43-041-30054

WELL NAME: WOLVERINE ST 17-10

OPERATOR: WOLVERINE GAS & OIL CO (N1655)

PHONE NUMBER: 616-458-1150

CONTACT: EDWARD HIGUERA

PROPOSED LOCATION:

NENW 20 230S 010W

SURFACE: 0193 FNL 2136 FWL

BOTTOM: 0773 FSL 1796 FEL

COUNTY: SEVIER

LATITUDE: 38.79474 LONGITUDE: -111.9330

UTM SURF EASTINGS: 418971 NORTHINGS: 4294205

FIELD NAME: COVENANT (492)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 3 - State

LEASE NUMBER: ML-46605

PROPOSED FORMATION: NAVA

SURFACE OWNER: 1 - Federal

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

_____ Plat

_____ Bond: Fed[] Ind[] Sta[] Fee[]
(No. B001849)

_____ Potash (Y/N)

_____ Oil Shale 190-5 (B) or 190-3 or 190-13

_____ Water Permit
(No. 63-2529)

_____ RDCC Review (Y/N)
(Date:)

_____ Fee Surf Agreement (Y/N)

_____ Intent to Commingle (Y/N)

LOCATION AND SITING:

____ R649-2-3.

Unit: WOLVERINE

____ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

____ R649-3-3. Exception

____ Drilling Unit

Board Cause No:

Eff Date:

Siting:

____ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS:

API Number: 4304130054

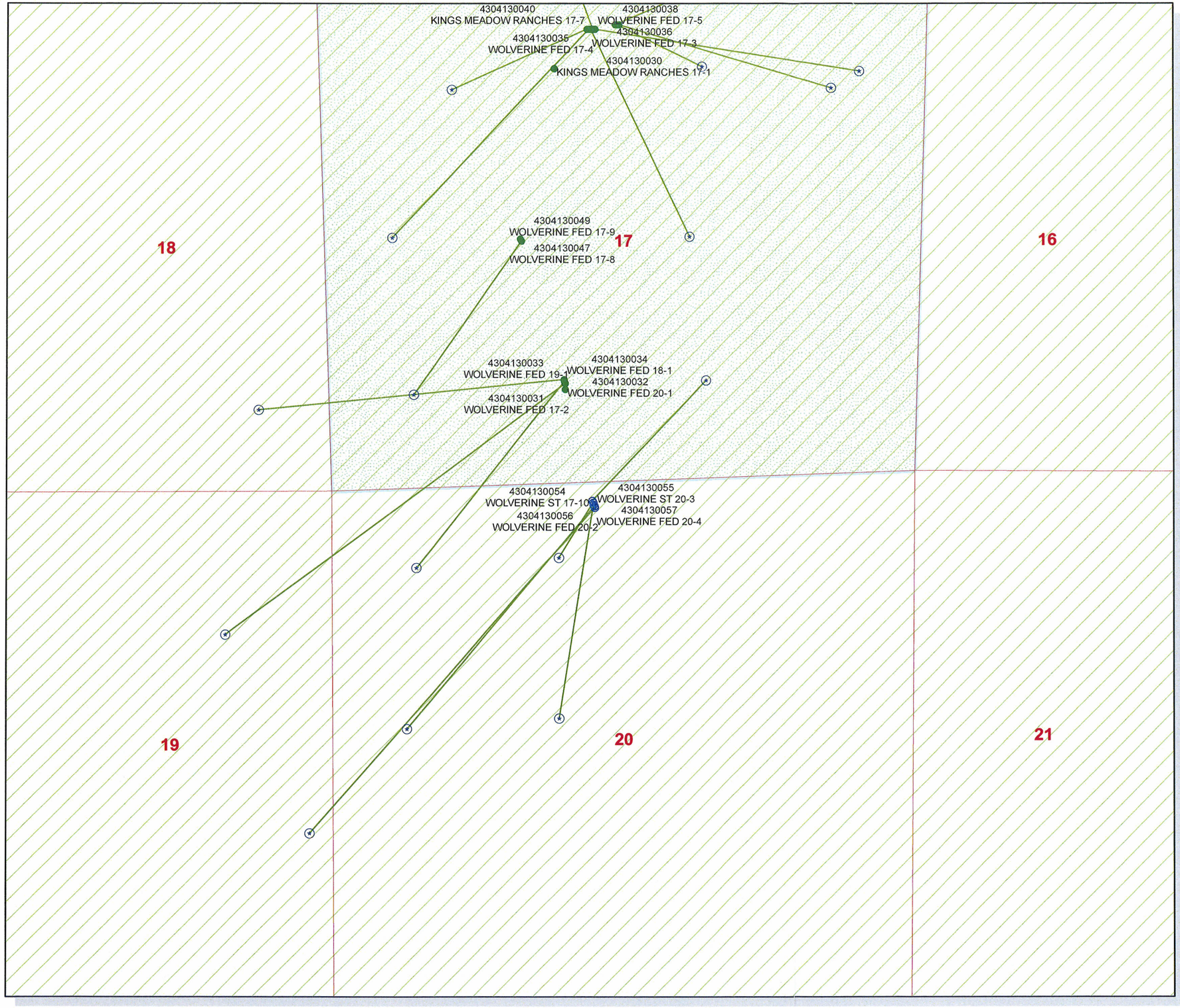
Well Name: WOLVERINE ST 17-10

Township 23.0 S Range 01.0 W Section 20

Meridian: SLBM

Operator: WOLVERINE GAS & OIL CO UT

Map Prepared:
Map Produced by Diana Mason



Units

STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS
- ACTIVE
- COMBINED
- Sections

Wells Query Events
- <all other values>

GIS_STAT_TYPE
- <Null>
- APD
- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS

1,100 550 0 1,100 Feet

1:10,246

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 01/25/2008

API NO. ASSIGNED: 43-041-30054

WELL NAME: WOLVERINE ST 17-10
OPERATOR: WOLVERINE GAS & OIL CO (N1655)
CONTACT: EDWARD HIGUERA

PHONE NUMBER: 616-458-1150

PROPOSED LOCATION:
NENW 20 230S 010W
SURFACE: 0193 FNL 2136 FWL
SWSE BOTTOM: 0596 FSL 2017 FEL Sec 17
COUNTY: SEVIER
LATITUDE: 38.79474 LONGITUDE: -111.9330
UTM SURF EASTINGS: 418971 NORTHINGS: 4294205
FIELD NAME: COVENANT (492)

INSPECT LOCATN BY: / /		
Tech Review	**Initials**	**Date**
Engineering	DKD	2/8/08
Geology		
Surface		

LEASE TYPE: 3 - State
LEASE NUMBER: ML-46605
SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: NAVA
COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

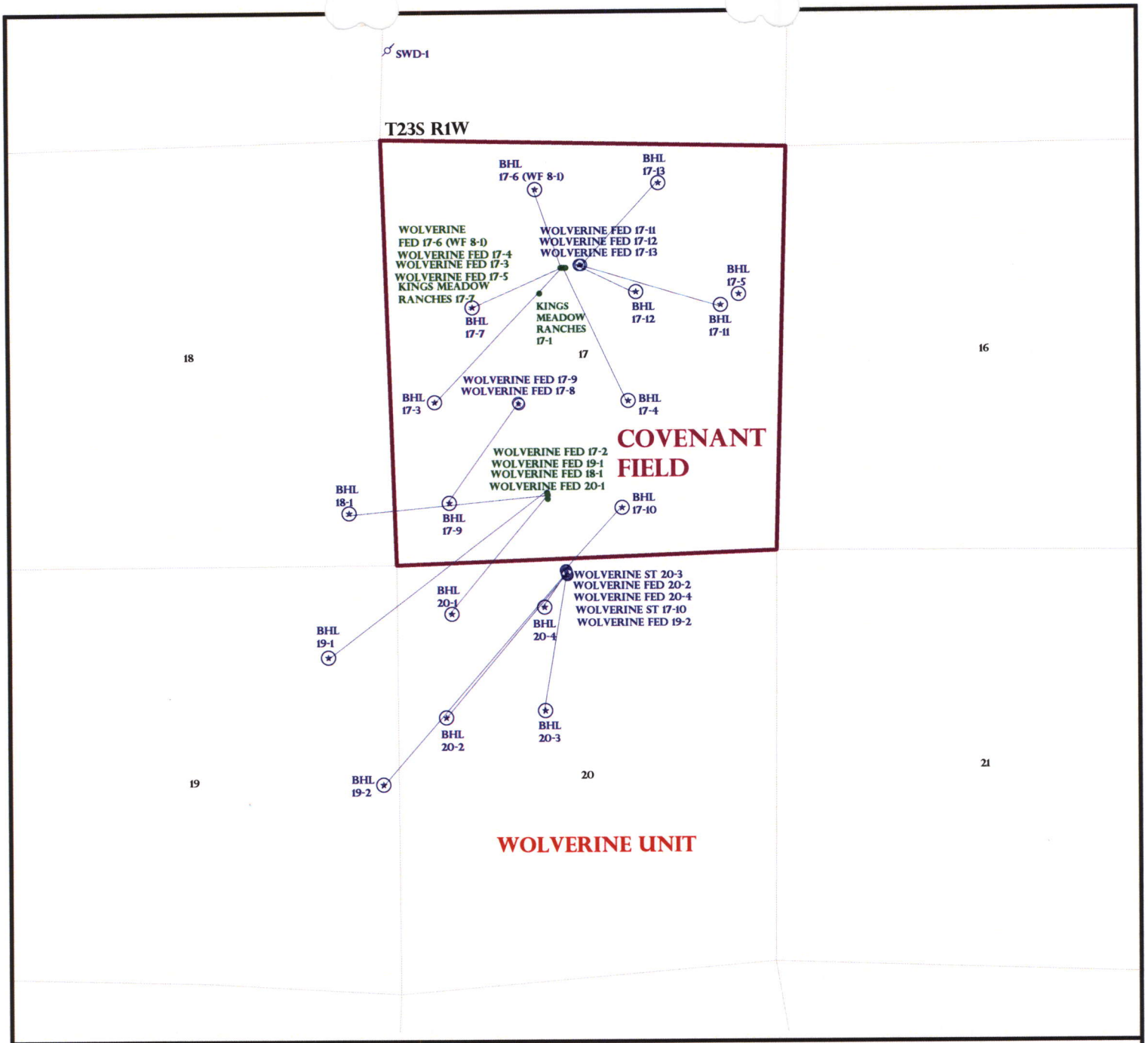
✓ Plat
✓ Bond: Fed[] Ind[] Sta[] Fee[]
(No. B001849)
N Potash (Y/N)
N Oil Shale 190-5 (B) or 190-3 or 190-13
✓ Water Permit
(No. 63-2529)
N RDCC Review (Y/N)
(Date:)
NA Fee Surf Agreement (Y/N)
NA Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.
Unit: WOLVERINE
___ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells
___ R649-3-3. Exception
___ Drilling Unit
Board Cause No:
Eff Date:
Siting:
✓ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS: 1- Federal Approval
2- Spacing Stip
3- STATEMENT OF BASIS



OPERATOR: WOLVERINE G&O CO (N1655)

SEC: 20 T.23S R. 1W

FIELD: COVENANT (492)

COUNTY: SEVIER

SPACING: R649-3-11 / DIRECTIONAL DRILLING

Field Status
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Status
- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING

UTAH DNR
OIL, GAS & MINING

N
W E
S

PREPARED BY: DIANA MASON
DATE: 30-JANUARY-2008

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
675	43-041-30054-00-00		OW	F	No

Operator WOLVERINE GAS & OIL CO UT **Surface Owner-APD**
Well Name WOLVERINE ST 17-10 **Unit** WOLVERINE
Field COVENANT **Type of Work**
Location NENW 20 23S 1W S 193 FNL 2136 FWL GPS Coord (UTM) 418971E 4294205N

Geologic Statement of Basis

This location is placed in the High Plateaus section of the Colorado Plateau physiographic province in western central Utah. Some people have characterized this area as being in the Basin and Range - Colorado Plateau transition zone. It is other wise characterized as being astride the Sevier Overthrust Belt. The location is on federal surface acreage a few miles east of the Sevier River, in the Peterson Creek drainage, a tributary of Brine Creek, which subsequently flows into the Sevier River. The surface owner rancher heavily allocates water for agriculture derived from water rights on some local springs, which arise from the volcanic rocks just to the east. The well is a proposed directional well and will likely spud into alluvium covering the evaporite-rich Jurassic-age Arapien Shale, terminating in Section 17 in the SW/ 4 SE/4 in the upper overthrust plate in the Navajo Sandstone. The proposal calls for a saturated salt mud system from below the surface casing into the Navajo Sandstone. The quality of any surface water that manages to escape upstream allocation is diminished as it flows past the location and into Brine Creek, owing to the evaporite minerals in the Arapien Shale. Any water contained in the Arapien Shale is also likely to be of poor quality. A Division of Water Rights publication notes that aquifers in close proximity to the Arapien Shale are also likely to contain ground water with high TDS levels. Inasmuch as there do not appear to be any intervening aquifers documented in this area, which lie between the Arapien Shale and the underlying Twin Creek Limestone and Navajo Sandstone, it is unlikely that any high quality ground water will be encountered. At this location it is unlikely that any high quality ground water resource will be encountered in the Twin Creek/Navajo, at that depth, in any strata drilled below the Navajo or at all. The proposed casing, cementing and drilling fluid program should be sufficient to control and isolate the poor quality ground waters expected to be encountered in a well at this location. Numerous surface and underground water rights (one filed by the Operator) are found within a mile.

Chris Kierst — 2/12/2008
APD Evaluator — **Date / Time**

Surface Statement of Basis

Surface rights at the proposed location are owned by the Federal Government. The operator is responsible for obtaining all required surface permits and/or rights-of-way.

Brad Hill — 2/11/2008
Onsite Evaluator — **Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
	None

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator WOLVERINE GAS & OIL CO UT
Well Name WOLVERINE ST 17-10
API Number 43-041-30054-0 **APD No** 675 **Field/Unit** COVENANT
Location: 1/4,1/4 NENW **Sec** 20 **Tw** 23S **Rng** 1W 193 FNL 2136 FWL
GPS Coord (UTM) **Surface Owner**

Participants

Regional/Local Setting & Topography

Surface Use Plan

Current Surface Use

New Road Miles **Well Pad Width** **Well Pad Length** **Src Const Material** **Surface Formation**

Ancillary Facilities

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetland

Flora / Fauna

Soil Type and Characteristics

Erosion Issues

Sedimentation Issues

Site Stability Issues

Drainage Diverson Required

Berm Required?

Erosion Sedimentation Control Required?

Paleo Survey Run? **Paleo Potental Observed?** **Cultural Survey Run?** **Cultural Resources?**

Reserve Pit

Site-Specific Factors **Site Ranking**

Distance to Groundwater (feet)
Distance to Surface Water (feet)
Dist. Nearest Municipal Well (ft)
Distance to Other Wells (feet)
Native Soil Type
Fluid Type
Drill Cuttings
Annual Precipitation (inches)
Affected Populations
Presence Nearby Utility Conduits

Final Score **Sensitivity Level**

Characteristics / Requirements

Closed Loop Mud Required?	**Liner Required?**	**Liner Thickness**	**Pit Underlayment Required?**

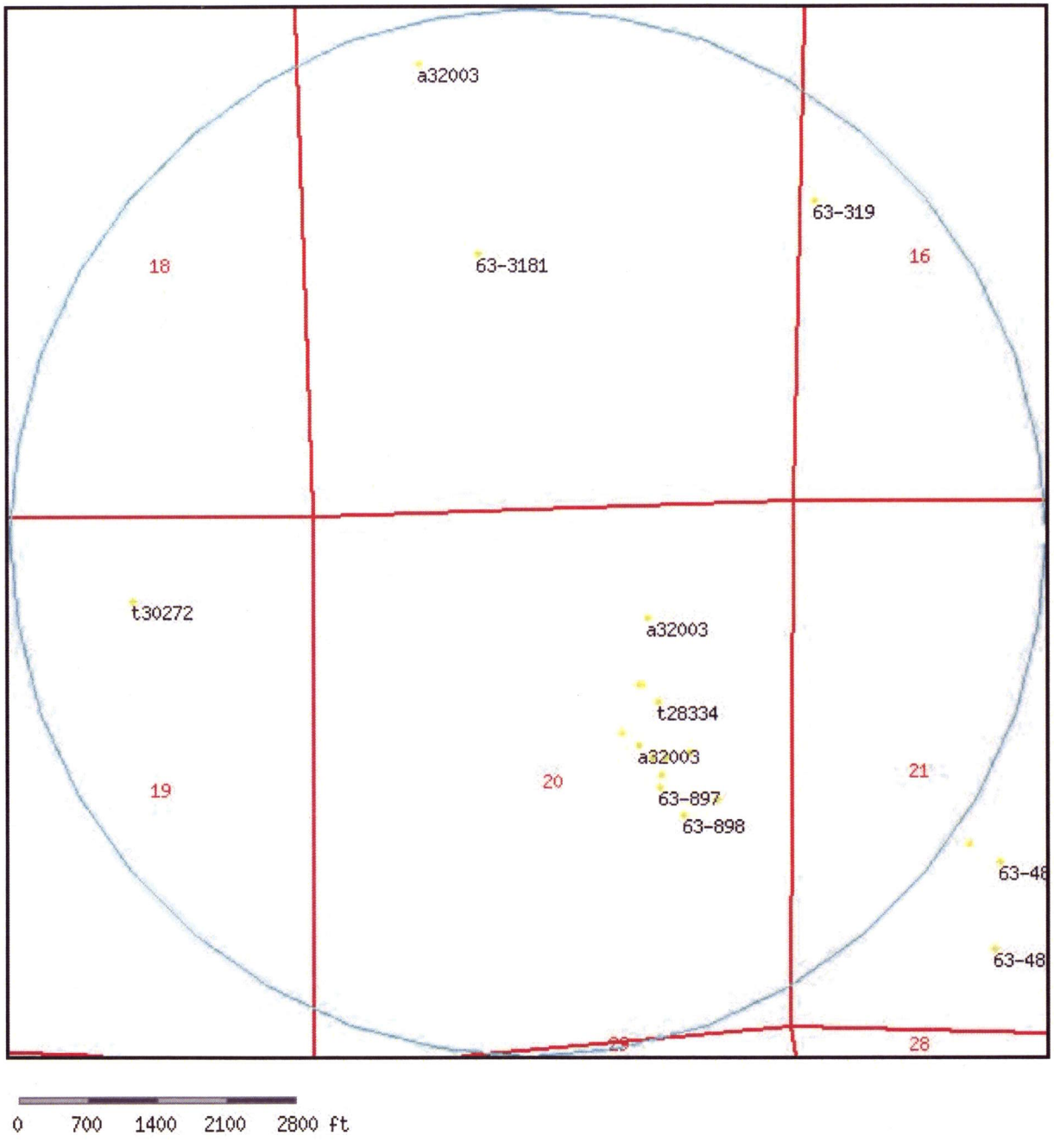
Other Observations / Comments

Brad Hill	2/11/2008
Evaluator	**Date / Time**

WRPLAT Program Output Listing

Version: 2007.04.13.01 Rundate: 02/12/2008 03:09 PM

Radius search of 5280 feet from a point S193 E2136 from the NW corner, section 20, Township 23S, Range 1W, SL b&m Criteria:wrtypes=W,C,E podtypes=S,U,Sp status=U,A,P usetypes=all



Water Rights

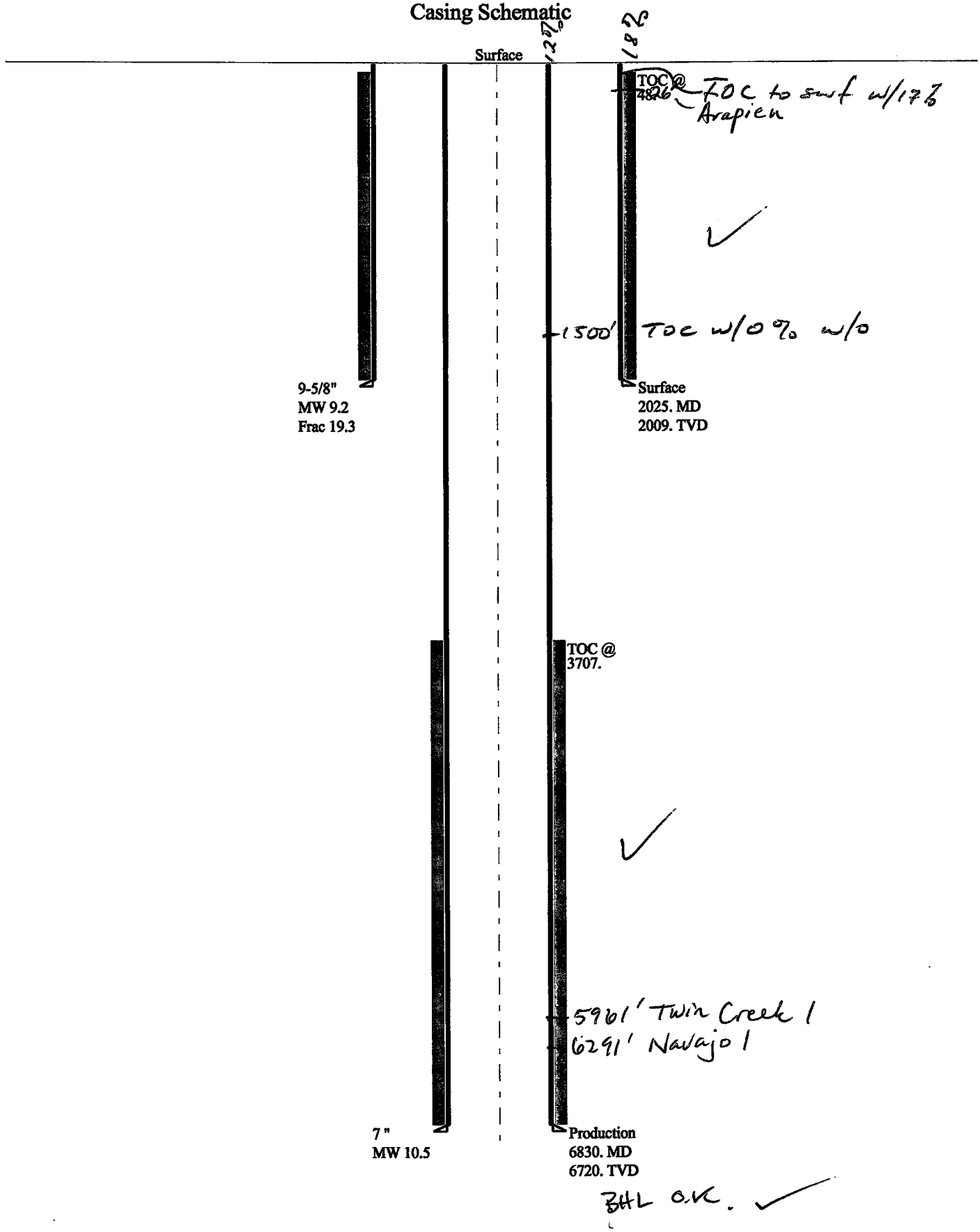
WR Number	Diversion Type/Location	Well Log	Status	Priority	Uses	CFS	ACFT	Owner Name
63-2504	Surface		P	18700000	M	0.640	0.000	TOWN OF SIGURD
	N3420 W1567 SE 20 23S 1W SL							SIGURD UT 84657
63-2504	Underground		P	18700000	M	0.640	0.000	TOWN OF SIGURD
	N2737 W1048 SE 20 23S 1W SL							SIGURD UT 84657
63-2504	Surface		P	18700000	M	0.640	0.000	TOWN OF SIGURD
	N2262 W765 SE 20 23S 1W SL							SIGURD UT 84657
63-3180	Surface		P	1870	I	3.160	0.000	KINGS MEADOW RANCHES LLC
	S2900 E1800 NW 17 23S 1W SL							C/O KENNETH DASTRUP
63-3181	Surface		P	1870	DS	0.010	0.000	KINGS MEADOW RANCHES LLC
	S2900 E1800 NW 17 23S 1W SL							C/O KENNETH DASTRUP
63-319	Underground		P	19560121	S	0.015	0.000	A. BRYANT AND J. LLEWELLYN YOUNG
	N330 E100 W4 16 23S 1W SL							RICHFIELD UT 84701
63-48	Surface		P	19350612	M	0.097	0.000	TOWN OF SIGURD
	S3528 E1760 NW 21 23S 1W SL							SIGURD UT 84657
63-48	Surface		P	19350612	M	0.097	0.000	TOWN OF SIGURD
	S4588 E2027 NW 21 23S 1W SL							SIGURD UT 84657
63-48	Surface		P	19350612	M	0.097	0.000	TOWN OF SIGURD
	S3716 E2081 NW 21 23S 1W SL							SIGURD UT 84657
63-58	Surface		P	19390522	M	0.254	0.000	TOWN OF SIGURD
	N3420 W1567 SE 20 23S 1W SL							SIGURD UT 84657
63-58	Underground		P	19390522	M	0.254	0.000	TOWN OF SIGURD

	N2737 W1048 SE 20 23S 1W SL						SIGURD UT 84657
63-58	Surface		P	19390522	M	0.254 0.000	TOWN OF SIGURD
	N2262 W765 SE 20 23S 1W SL						SIGURD UT 84657
63-59	Surface		P	19390522	M	0.254 0.000	TOWN OF SIGURD
	N3420 W1567 SE 20 23S 1W SL						SIGURD UT 84657
63-59	Underground		P	19390522	M	0.254 0.000	TOWN OF SIGURD
	N2737 W1048 SE 20 23S 1W SL						SIGURD UT 84657
63-59	Surface		P	19390522	M	0.254 0.000	TOWN OF SIGURD
	N2262 W765 SE 20 23S 1W SL						SIGURD UT 84657
63-895	Underground		P	1909	I	0.080 0.000	KINGS MEADOW RANCHES L.L.C.
	N6 W1438 E4 20 23S 1W SL						C/O KENNETH DASTRUP
63-896	Underground		P	1909	I	0.080 0.000	KINGS MEADOW RANCHES L.L.C.
	S156 W1358 E4 20 23S 1W SL						C/O KENNETH DASTRUP
63-897	Underground		P	1909	I	0.080 0.000	KINGS MEADOW RANCHES L.L.C.
	S290 W1372 E4 20 23S 1W SL						C/O KENNETH DASTRUP
63-898	Underground		P	1909	I	0.080 0.000	KINGS MEADOW RANCHES L.L.C.
	S561 W1114 E4 20 23S 1W SL						C/O KENNETH DASTRUP
63-899	Underground		P	1909	I	0.080 0.000	KINGS MEADOW RANCHES L.L.C.
	N15 W1320 E4 20 23S 1W SL						C/O KENNETH DASTRUP
a30112	Underground	well info	A	20050420	IO	0.002 1.000	WOLVERINE GAS AND OIL CORPORATION

	S2411 W1783 NE 20 23S 1W SL					ONE RIVER FRONT PLAZA
a32003	Surface	A	20060929	DIOS	4.770 494.465	KENNETH A. AND JANETTE C. DASTRUP
	N4324 W3834 SE 17 23S 1W SL					KING MEADOW CANYON
a32003	Surface	A	20060929	DIOS	4.770 494.465	KENNETH A. AND JANETTE C. DASTRUP
	N2804 W1559 SE 20 23S 1W SL					KING MEADOW CANYON
a32003	Surface	A	20060929	DIOS	4.770 494.465	KENNETH A. AND JANETTE C. DASTRUP
	N3431 W1532 SE 20 23S 1W SL					KING MEADOW CANYON
a32003	Surface	A	20060929	DIOS	4.770 494.465	KENNETH A. AND JANETTE C. DASTRUP
	N4085 W1467 SE 20 23S 1W SL					KING MEADOW CANYON
t28334	Surface	U	20031009	O	0.000 14.000	SEVIER VALLEY CANAL COMPANY
	S2100 W1400 NE 20 23S 1W SL					P.O. BOX 245
t30272	Underground	A	20050526	O	0.000 14.000	MACK T. AND EARLENE S. DASTRUP
	S869 W1901 SW 17 23S 1W SL					BOX 570125

2008-02 Wolverine ST 17-10

Casing Schematic



BOPE REVIEW

Well Name	Wolverine G&O ST 17-10 API 43-041-300541834

INPUT

Well Name	Wolverine G&O ST 17-10 API 43-041-300541834			
	String 1	String 2	String 3	String 4
Casing Size (")	9 5/8	7		
Setting Depth (TVD)	2025	6720		
Previous Shoe Setting Depth (TVD)	0	2025	0	0
Max Mud Weight (ppg)	10.5	9.2		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3520	7240		

Calculations	String 1	9 5/8 "	
Max BHP [psi]	.052*Setting Depth*MW =	1106	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	863	NO
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	660	NO Reasonable setting depth - no expected pressures/flows
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	660	NO
Required Casing/BOPE Test Pressure		2025	psi
*Max Pressure Allowed @ Previous Casing Shoe =		0	psi *Assumes 1psi/ft frac gradient

Calculations	String 2	7 "	
Max BHP [psi]	.052*Setting Depth*MW =	3215	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	2408	YES
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	1736	YES ✓
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	2182	NO - O.K.
Required Casing/BOPE Test Pressure		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe =		2025	psi *Assumes 1psi/ft frac gradient

Well name:	**2008-02 Wolverine ST 17-10**
Operator:	**Wolverine Gas and Oil Company of Utah, LLC**
String type:	Surface
Project ID:	43-041-30054
Location:	Sevier County

Design parameters:

Collapse
Mud weight: 9.200 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 1,768 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,009 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 1,744 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 103 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 290 ft

Cement top: 48 ft

Directional Info - Build & Drop
Kick-off point 1000 ft
Departure at shoe: 156 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 12.68 °

Re subsequent strings:
Next setting depth: 6,720 ft
Next mud weight: 10.500 ppg
Next setting BHP: 3,666 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,009 ft
Injection pressure: 2,009 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	2025	9.625	36.00	J-55	ST&C	2010	2025	8.796	879

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	961	2020	2.102	2009	3520	1.75	63	394	6.30 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Minerals
Phone: 801-538-5357
FAX: 801-359-3940
Date: February 1,2008
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 2010 ft, a mud weight of 9.2 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	**2008-02 Wolverine ST 17-10**
Operator:	**Wolverine Gas and Oil Company of Utah, LLC**
String type:	Production
Project ID:	43-041-30054
Location:	Sevier County

Design parameters:

Collapse
Mud weight: 10.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 2,187 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 3,660 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 5,829 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 169 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 3,707 ft

Directional Info - Build & Drop
Kick-off point 1000 ft
Departure at shoe: 1124 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
2	4000	7	23.00	HCL-80	LT&C	3937	4000	6.25	884.1
1	2830	7	26.00	HCL-80	LT&C	6710	6830	6.151	608

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
2	2148	5511	2.566	3053	6340	2.08	137	485	3.54 J
1	3660	7800	2.131	3663	7240	1.98	46	570	12.29 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Minerals
Phone: 801-538-5357
FAX: 801-359-3940
Date: February 1,2008
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 6710 ft, a mud weight of 10.5 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

February 13, 2008

Wolverine Gas and Oil Company of Utah, LLC
55 Campau NW
Grand Rapids, MI 49503-2616

Re: Wolverine State 17-10 Well, 193' FNL, 2136' FWL, NE NW, Sec. 20, T. 23 South, R. 1 West, Bottom Location 596' FSL, 2017' FEL, SW SE, Sec. 17, T. 23 South, R. 1 West, Sevier County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-041-30054.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Sevier County Assessor
Bureau of Land Management Utah State Office
SITLA

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

Operator: Wolverine Gas and Oil Company of Utah, LLC

Well Name & Number Wolverine State 17-10

API Number: 43-041-30054

Lease: ML-46605

Location:	NE NW	**Sec.** 20	**T.** 23 South	**R.** 1 West
Bottom Location:	SW SE	**Sec.** 17	**T.** 23 South	**R.** 1 West

Conditions of Approval

1. **General**

   Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. **Notification Requirements**

   The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

   - 24 hours prior to cementing or testing casing – contact Dan Jarvis
   - 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
   - 24 hours prior to spudding the well – contact Carol Daniels
   - Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
   - Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

   The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

   - Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
   - Any changes to the approved drilling plan – contact Dustin Doucet

   The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

   - Dan Jarvis at: (801) 538-5338 office (801) 942-0871 home
   - Carol Daniels at: (801) 538-5284 office
   - Dustin Doucet at: (801) 538-5281 office (801) 733-0983 home

3. **Reporting Requirements**

   All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

8. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: **Wolverine Gas & Oil Co UT**

Well Name: **Wolverine ST 17-10**

API No: **43-041-30054** Lease Type: **State/Federal**

Section **20** Township **23S** Range **01W** County **Sevier**

Drilling Contractor **Pete Martin** Rig # **Rathole**

SPUDDED:

Date **6-23-08**

Time **8:00 AM**

How **Dry**

Drilling will Commence:

Reported by **Steve Hash**

Telephone # **918-629-9801**

Date 7-01-08 **Signed RM**

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: Wolverine Gas and Oil Company of Utah, LLC
Operator Account Number: N 1655
Address: 55 Campau NW, One Riverfront Plaza
city Grand Rapids
state MI zip 49503-2616
Phone Number: (616) 458-1150

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304130054	Wolverine State 17-10		NENW	20	23S	1W	Sevier
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	13995	6/23/2008			7/15/08	
Comments: BHL SW SE Sec 17 T23S R1W Sevier Co NAVA						CONFIDENTIAL	

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
Comments:							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Steven R Hash - Consulting Engineer
Name (Please Print)
Steven R. Hash
Signature
EXACT (918) 599-9400
Title
7/14/2008
Date

RECEIVED
JUL 14 2008
DIV. OF OIL, GAS & MINING

(5/2000)

WOLVERINE GAS AND OIL CORPORATION

Energy Exploration in Partnership with the Environment

December 30, 2008

Mr. Gil Hunt
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Wolverine State 17-10
API No. 43-041-30054
193' FNL, 2136' FWL, (NE/4 NW/4),
Section 20, T. 23 South, R. 1 West, SLB&M,
Sevier County, Utah

Dear Mr. Hunt:

Enclosed herewith is a Sundry notice with attachments requesting approval to move the bottom-hole location (BHL) for the subject well. Drilling operations on this well are currently underway after verbal approval for the requested BHL change was obtained from Dustin Doucet on December 30, 2008.

Because this well will be directionally drilled, this letter with the accompanying plat also serves as application for directionally drilling the well to the new location per R649-3-11. Wolverine is the owner of all oil and gas within 460 feet from all points along the intended wellbore for the well. Information relating to R649-3-11 is as follows:

Operator: Wolverine Gas and Oil Company of Utah, LLC

Address: One Riverfront Plaza
55 Campau, N.W.
Grand Rapids, MI 49503-2616

Well: Wolverine Federal 17-10

Field: Covenant

Reservoir: Navajo

County: Sevier

Reason: Restrictive topography and to minimize surface impact

Wolverine Operating Company of Utah, LLC respectfully requests approval this request. Please accept this letter as Wolverine's written request for confidential treatment of all information relating to this application and the proposed well.

Sincerely,

Ellis M. Peterson – Senior Production Engineer
Wolverine Operating Company of Utah, LLC

Attachment to Sundry Notice – Changes to Original Drilling Plan

RECEIVED
JAN 05 2009
DIV. OF OIL, GAS & MINING

Wolverine Gas and Oil Company of Utah, LLC

Drilling Plan revisions for the: **Wolverine State 17-10**
API No. 43-041-30054
NE/4 NW/4 Sec. 20, T23S, R1W, SLB&M
Sevier County, Utah

	Revised Drilling Plan	Original APD
Location of Well:		
At Surface:	193' FNL, 2136' FWL, Sec. 20	193' FNL, 2136' FWL, Sec. 20
At Navajo Top:	773' FSL, 1796' FEL, Sec. 17	773' FSL, 1796' FEL, Sec. 17
At TD:	773' FSL, 1796' FEL, Sec. 17	773' FSL, 1796' FEL, Sec. 17
Total Depth:	7000' MD, 6790' TVD	6856' MD, 6600' TVD
Elevations:	5865' GL, 5891' KB	5865' GL, 5891' KB

Geology:

Formation	TVD Interval (KB)	MD Interval (KB)
Arapien	26' – 5961'	26' – 6170'
Twin Creek 1	5961' – 6291'	6170' – 6501'
Navajo 1	6291' – 6790'	6501' – 7000'
Total Depth	6790'	7000'

Formation	TVD Interval (KB)	MD Interval (KB)
Arapien	26' – 5961'	26' – 6089'
Twin Creek 1	5961' – 6291'	6089' – 6420'
Navajo 1	6291' – 6700'	6420' – 6830'
Total Depth	6700'	6830'

Revised Drilling Plan	Original APD

Well Control: No changes from original drilling plan.

Casing Program:

Hole Size	Casing Size, Grade, Weight	Depth Interval	Hole Size	Casing Size, Grade, Weight	Depth Interval
30"	20", conductor	0 – 80'	30"	20", conductor	0 – 80'
12.25"	9-5/8", J-55, 36.0#	0 – 2025'	12.25"	9-5/8", J-55, 36.0#	0 – 2025'
8.750"	7", 26.0# N-80 & HCL-80	0 – 7000'	8.750"	7", HCL-80, 23.0 & 26.0#	0 – 6830'

Note: See casing design factors in updated drilling program.

Cementing Program:

Casing	Cement Quantity, Type, Yield, and Slurry Weight	Casing	Cement Quantity, Type, Yield, and Slurry Weight
9-5/8"	220 sks, CBM Lite, 3.548 ft^3/sk, 11.0 ppg 250 sks, Class "G", 1.165 ft^3/sk, 15.8 ppg	9-5/8"	225 sks, CBM Lite, 4.12 ft^3/sk, 10.5 ppg 275 sks, Premium Plus, 1.19 ft^3/sk, 15.6 ppg
7"	90 sks, CBM Light, 3.548 ft^3/sk, 11.0 ppg 450 sks, Class "G", 1.247 ft^3/sk, 15.8 ppg 150 sks, 50/50 Poz, 1.267 ft^3/sk, 14.35 ppg	7"	400 sks, Foamed Elastiseal, 2.08 ft^3/sk, 10.0 ppg 125 sks, Elastiseal, 1.45 ft^3/sk, 14.35 ppg

Note: Revised 7" to be cemented in two stages with Stage 1 being 50/50 Poz cement.

Mud Program:

Depth	Mud Weight (ppg)	Mud Type
0 – 2025'	8.4 – 9.2	Fresh Water
2025' – 7000'	9.2 – 10.5	Salt Mud

Depth	Mud Weight (ppg)	Mud Type
0 – 2025'	8.4 – 9.2	Fresh Water
2025' – 6830'	9.2 – 10.5	Salt Mud

Revised Drilling Plan		Original APD
Evaluation:		
Mud Logging:	2025' to TD	2025' to TD
Drill Stem Tests:	None	None
Coring:	None	None
Wireline Logs:	TD to 2025'	TD to 2025'
Expected Bottom-Hole Conditions:		
Hydrogen Sulfide:	None expected	None expected
Pressure:	No abnormal pressures (0.46 psi/ft)	No abnormal pressures (0.46 psi/ft)
Temperature:	BHT at TD of 190 °F	BHT at TD of 190 °F
Surface Use Plan:	No changes from original plan.	

Attachment to Sundry Notice – Changes to Original Drilling Plan

Wolverine Gas and Oil Company of Utah, LLC

Drilling Plan revisions for the: **Wolverine State 17-10**
API No. 43-041-30054
NE/4 NW/4 Sec. 20, T23S, R1W, SLB&M
Sevier County, Utah

	Revised Drilling Plan	Original APD
Location of Well:		
At Surface:	193' FNL, 2136' FWL, Sec. 20	193' FNL, 2136' FWL, Sec. 20
At Navajo Top:	773' FSL, 1796' FEL, Sec. 17	773' FSL, 1796' FEL, Sec. 17
At TD:	773' FSL, 1796' FEL, Sec. 17	773' FSL, 1796' FEL, Sec. 17
Total Depth:	7000' MD, 6790' TVD	6856' MD, 6600' TVD
Elevations:	5865' GL, 5891' KB	5865' GL, 5891' KB

Geology:

Formation	TVD Interval (KB)	MD Interval (KB)
Arapien	26' – 5961'	26' – 6170'
Twin Creek 1	5961' – 6291'	6170' – 6501'
Navajo 1	6291' – 6790'	6501' – 7000'
Total Depth	6790'	7000'

Formation	TVD Interval (KB)	MD Interval (KB)
Arapien	26' – 5961'	26' – 6089'
Twin Creek 1	5961' – 6291'	6089' – 6420'
Navajo 1	6291' – 6700'	6420' – 6830'
Total Depth	6700'	6830'

Revised Drilling Plan	Original APD

Well Control: No changes from original drilling plan.

Casing Program:

Hole Size	Casing Size, Grade, Weight	Depth Interval	Hole Size	Casing Size, Grade, Weight	Depth Interval
30"	20", conductor	0 – 80'	30"	20", conductor	0 – 80'
12.25"	9-5/8", J-55, 36.0#	0 – 2025'	12.25"	9-5/8", J-55, 36.0#	0 – 2025'
8.750"	7", 26.0# N-80 & HCL-80	0 – 7000'	8.750"	7", HCL-80, 23.0 & 26.0#	0 – 6830'

Note: See casing design factors in updated drilling program.

Cementing Program:

Casing	Cement Quantity, Type, Yield, and Slurry Weight	Casing	Cement Quantity, Type, Yield, and Slurry Weight
9-5/8"	220 sks, CBM Lite, 3.548 ft^3/sk, 11.0 ppg 250 sks, Class "G", 1.165 ft^3/sk, 15.8 ppg	9-5/8"	225 sks, CBM Lite, 4.12 ft^3/sk, 10.5 ppg 275 sks, Premium Plus, 1.19 ft^3/sk, 15.6 ppg
7"	90 sks, CBM Light, 3.548 ft^3/sk, 11.0 ppg 450 sks, Class "G", 1.247 ft^3/sk, 15.8 ppg 150 sks, 50/50 Poz, 1.267 ft^3/sk, 14.35 ppg	7"	400 sks, Foamed Elastiseal, 2.08 ft^3/sk, 10.0 ppg 125 sks, Elastiseal, 1.45 ft^3/sk, 14.35 ppg

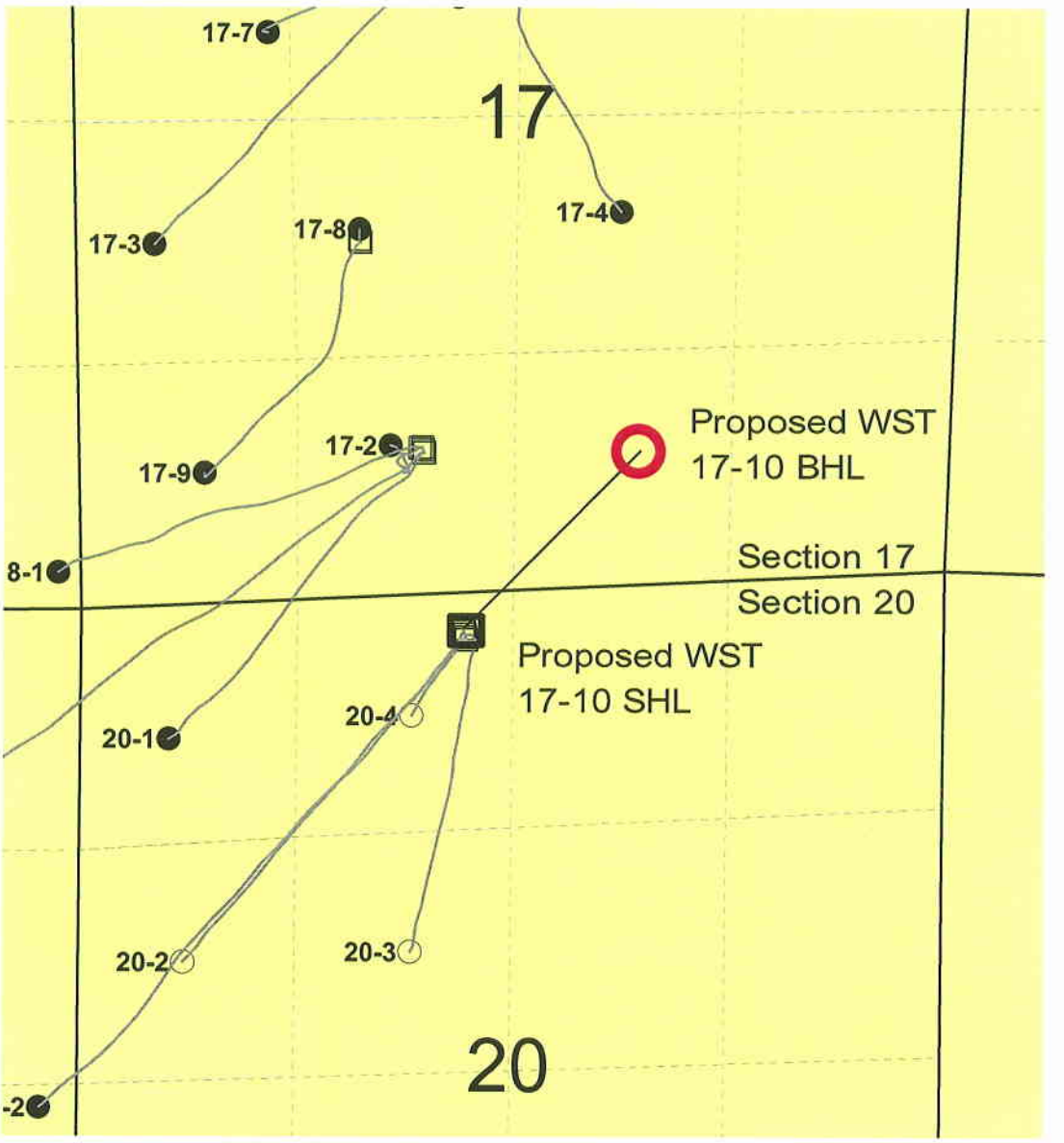
Note: Revised 7" to be cemented in two stages with Stage 1 being 50/50 Poz cement.

Mud Program:

Depth	Mud Weight (ppg)	Mud Type
0 – 2025'	8.4 – 9.2	Fresh Water
2025' – 7000'	9.2 – 10.5	Salt Mud

Depth	Mud Weight (ppg)	Mud Type
0 – 2025'	8.4 – 9.2	Fresh Water
2025' – 6830'	9.2 – 10.5	Salt Mud

	Revised Drilling Plan	Original APD
Evaluation:		
Mud Logging:	2025' to TD	2025' to TD
Drill Stem Tests:	None	None
Coring:	None	None
Wireline Logs:	TD to 2025'	TD to 2025'
Expected Bottom-Hole Conditions:		
Hydrogen Sulfide:	None expected	None expected
Pressure:	No abnormal pressures (0.46 psi/ft)	No abnormal pressures (0.46 psi/ft)
Temperature:	BHT at TD of 190 °F	BHT at TD of 190 °F
Surface Use Plan:	No changes from original plan.	



Wolverine State 17-10 Well Location

SHL: 193' FNL, 2136' FWL, NE/4 NW/4 Sec. 20 T23S, R1W

BHL: 773' FSL, 1796' FEL, SW/4 SE/4 Sec. 17, T23S, R1W

Wolverine Lease

1 inch = 1000 feet

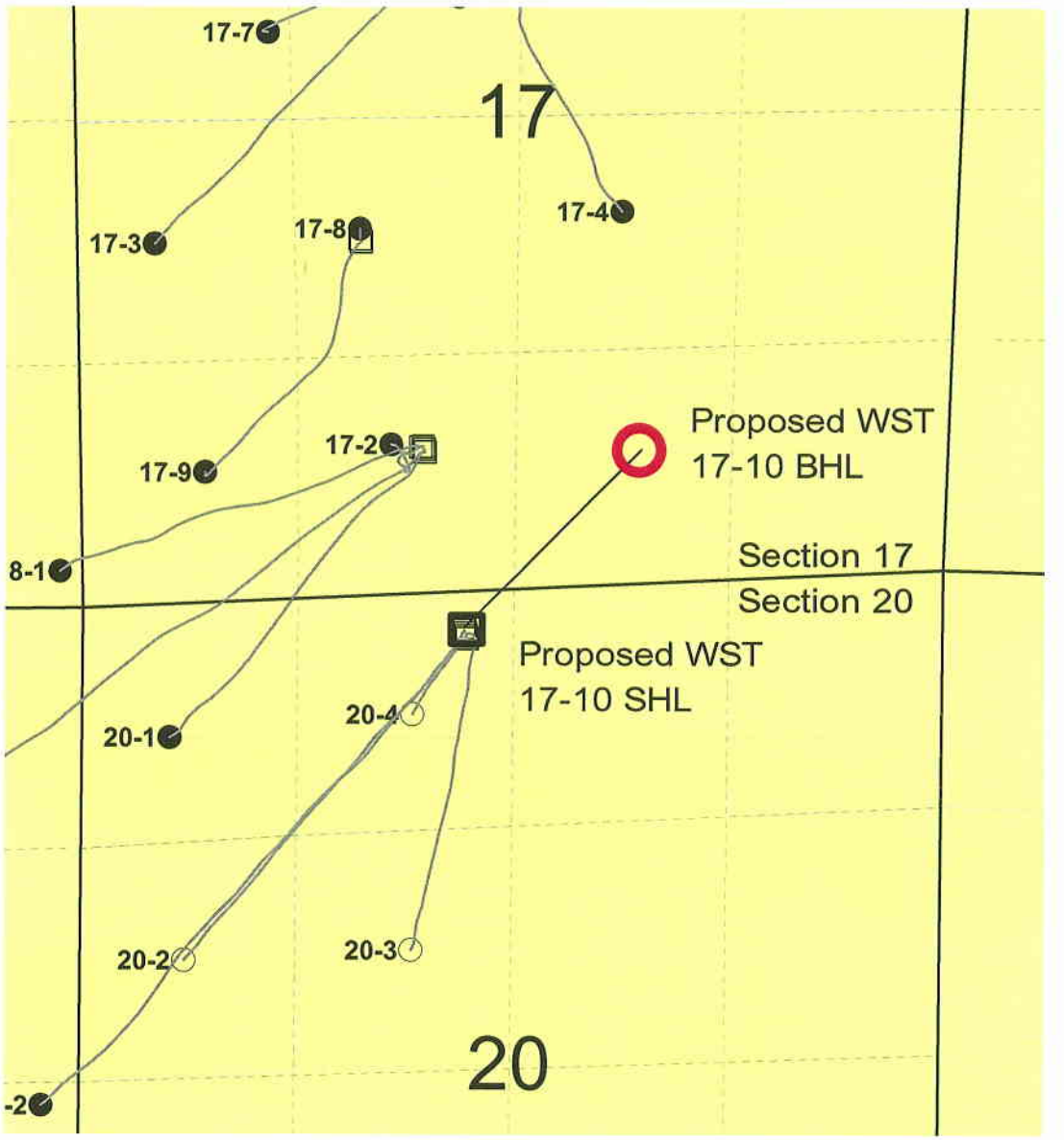
500 0 500 1000 1500 ft

WOLVERINE GAS & OIL CORPORATION
Energy Exploration in Partnership with the Environment
ONE RIVERFRONT PLAZA
55 CAMPAU, N.W.
GRAND RAPIDS, MI 49503-2616
(616) 458-1150

Directional Drilling Application Plat (R649-3-11)
T23S, R1W
Sevier County, UT

Date: 12/30/2008

Data Source: mjl080314 covenant basemap



Wolverine State 17-10 Well Location

SHL: 193' FNL, 2136' FWL, NE/4 NW/4 Sec. 20 T23S, R1W

BHL: 773' FSL, 1796' FEL, SW/4 SE/4 Sec. 17, T23S, R1W

Wolverine Lease

1 inch = 1000 feet

500 0 500 1000 1500 ft

WOLVERINE GAS & OIL CORPORATION
Energy Exploration in Partnership with the Environment
ONE RIVERFRONT PLAZA
55 CAMPAU, N.W.
GRAND RAPIDS, MI 49503-2616
(616) 458-1150

Directional Drilling Application Plat (R649-3-11)
T23S, R1W
Sevier County, UT

Date: 12/30/2008

Data Source: mj080314 covenant basemap

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PLAN

Wolverine State 17-10
NE/4 NW/4 Section 20, Township 23 South, Range 1 West, S.L.B & M.
Sevier County, Utah

Plan Summary:

It is planned to drill this confidential development well as a directional bore hole due to surface topography constraints and in accordance with the enclosed directional drilling plan. The well will be drilled to a measured depth of 7000' (6790' TVD) to test the upper thrust of the Twin Creek and Navajo formations. Well path deviation caused by subsurface geologic irregularities is expected to be the primary drilling concern in this area. No abnormal pressure is anticipated.

The planned location is as follows:

Surface Location:	193' FNL, 2136' FWL, Section 20, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ Navajo 1 target	773' FSL, 1796' FEL, Section 17, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ total depth	773' FSL, 1796' FEL, Section 17, T23S, R1W, S.L.B. & M.

Conductor casing will be set at approximately 80 feet and cemented to surface. A 12-1/4" hole will be drilled vertically to approximately 1000' and then deviated at 2 degrees per 100' build rate to 18 degrees hole angle at 2025' (2000' TVD) at which time 9-5/8" surface casing will be set and cemented to surface. An 8-3/4" hole will be drilled at approximately 18 degrees from vertical to approximately 5600' MD and then allowed to drop to vertical to penetrate the Twin Creek and Navajo formations to a well total depth of 7000' (6790' TVD). The well will be logged and 7" production casing will be set and cemented to 1500' (9-5/8" csg shoe @ 2025').

Drilling activities at this well are expected to commence in December 2008.

Well Name: **Wolverine State 17-10**

Surface Location: 193' FNL, 2136' FWL
NE/4 NW/4 Section 20, T23S, R1W, S.L.B. & M.
Sevier County, Utah

TD Bottom-Hole Location: 773' FSL, 1796' FEL; Sec 17, T23S, R1W, S.L.B. & M

Elevations (est): 5865' GL, 5891' KB

I. Geology:

Tops of important geologic markers and anticipated water, oil, gas, and mineral content are as follows:

Formation	TVD Interval (KB)	MD Interval (KB)	Contents	Pressure Gradient
Arapien	26' – 5961'	26' – 6170'		
Twin Creek 1	5961' – 6291'	6170' – 6501'	Oil & water	0.46 psi/ft
Navajo 1	6291' –6790'	6501' – 7000'	Oil & water	0.46 psi/ft
Total Depth	6790'	7000'		

II. Well Control:

The contracted drilling rig has a 10M BOP system but conditions only require a 5M BOP system. BOPE will be in place and tested as a 5M system prior to drilling out the surface casing shoe. See attached schematic of BOPE.

A. The BOPE will, as a minimum, include the following:

Wellhead Equipment (5M Min.):

BOPE Item	Flange Size and Rating
Annular Preventer	13-5/8" 5M
Double Rams (5" Pipe - top, Blind - bottom)	13-5/8" 10M
Drilling Spool w/ 2 side outlets (4" Choke Line, 4" Kill Line)	13-5/8" 10M x 13-5/8" 10M
Single Ram (Pipe)	13-5/8" 10M
DSA	13-5/8" 10M x 11" – 5M
Casing Head (9-5/8" SOW w/ two 2-1/16" SSO's)	11" 5M

Auxiliary Equipment (5M Min.):

BOPE Item
Choke Line with 2 valves (3" minimum)
Kill Line with 2 valves and one check valve (2" Minimum)
2 Chokes with one remotely controlled at a location readily accessible to the driller
Upper and lower kelly cock valves with handles
Safety Valves to fit all drill string connections in use
Inside BOP or float sub
Pressure gauge on choke manifold
Fill-up line above the uppermost preventer
Wear bushing in casing head

B. **Choke manifold** will be functionally equipped and sized at a minimum as shown on the attached diagram. All choke lines will be straight lines unless turns have tee blocks or are targeted with running tees, and all choke lines will be anchored. All valves (except chokes) in the kill line choke manifold and choke line will be full opening and allow straight through flow.

C. **System accumulator** will have sufficient capacity to open the hydraulically-controlled gate valve and close all rams plus the annular preventer (3 ram system will have added 50 percent safety factor to compensate for any fluid loss in the control system or preventers) and retain a minimum pressure of 200 psi above pre-charge on the closing manifold without use of the closing unit pumps. The fluid reservoir capacity shall be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir shall be maintained at the manufacturer's recommendations. The accumulator will have two (2) independent power sources available to close the preventers. Nitrogen bottles may be one of those sources, and if so, will have charge maintained per manufacturer's specifications.

D. **Accumulator pre-charge pressure test** will be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum specified limits. Only nitrogen gas will be used to precharge.

E. **Power for the closing unit pumps** will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure has decreased to the pre-set level.

F. **Accumulator pump capacity** will be such that, with the accumulator system isolated from service, the pumps will be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and retaining a minimum of 200 psi above the specified accumulator pre-charge pressure.

G. **Locking devices**, either manual (i.e., hand wheels) or automatic, will be installed on the ram type preventers. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.

H. **Remote controls** will be readily accessible to the driller and will be capable of both opening and closing all preventers. Master controls shall be at the accumulator and shall be capable of opening and closing all preventers and the choke line valve.

I. **Well control equipment testing** will be performed using clear water when the equipment is initially installed, whenever any seal subject to test pressure is broken, following related repairs, and as a minimum, every 30-day interval. The tests will apply to all related well control equipment.

Ram type preventers and associated equipment will be isolated and tested to 5000 psi. The annular preventer will be tested to 2500 psi. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer, for all tests. A casing head valve will be open below the test plug during testing of the BOP stack. Valves will be tested from the working pressure side with all down-stream valves open. Kill line valves will be tested with the check valve held open or the ball removed.

Pipe and blind rams will be activated each trip, but not more than once a day. The annular preventers will be functionally operated at least weekly. A pit level drill will be conducted weekly for each crew. All BOPE drills and tests will be recorded in the IADC driller's log.

III. Casing and Cementing:

A. Casing Program (all new casing):

Hole Size	Casing Size	Weight	Grade	Connection	Coupling Diameter	Setting Depth
30"	24"		Conductor			80' GL
12.25"	9.625"	36.0	J55	STC	10.625"	2025' kb
8.750"	7.000"	26.0	N-80 & HCL-80	LTC	7.656"	7000'kb

Casing O. D. (in)	9.625	7.0
Casing Grade	J-55	N-80 & HCL-80
Weight of Pipe (lbs/ft)	36.0	26.0
Connection	STC	LTC
Top Setting Depth - MD (ft)	0	0
Top Setting Depth - TVD (ft)	0	0
Bottom Setting Depth - MD (ft)	2025	7000
Bottom Setting Depth - TVD (ft)	2000	6790
Maximum Mud Weight - Inside (ppg)	9.2	8.4
Maximum Mud Weight - Outside (ppg)	9.2	10.5
Design Cement Top - MD (ft)	0	1500
Design Cement Top - TVD (ft)	0	1500
Max. Hydrostatic Inside w/ Dry Outside (psi)	957	2966
Casing Burst Rating (psi)	3520	7240
Burst Safety Factor (1.10 Minimum)	**3.68**	**2.44**
Max. Hydrostatic Outside w/ Dry Inside (psi)	957	3707
Collapse Rating	2020	5410
Collapse Safety Factor (1.125 Minimum)	**2.11**	**1.46**
Casing Weight in Air (kips)	72.9	182.0
Body Yield (kips)	564.0	604.0
Joint Strength (kips)	453.0	519.0
Tension Safety Factor (1.80 Minimum)	**6.21**	**2.85**

Casing with same or greater burst, collapse, and tension rating may be substituted for any of the planned casing sizes depending on availability and actual conditions.

B. Cementing Program

Casing Size	Cement Slurry	Quantity (sks)	Density (ppg)	Yield (ft^3/sk)
13.375"	Lead: Halliburton CBM Lite	220	11.0	3.548
	Tail: Class "G"	250	15.8	1.165
7.000"	Stage 1: 50/50 Poz	160	14.4	1.267
	Stage 2 Lead: CBM Lite	90	11.0	3.548
	Stage 2 Tail: Class 'G'	450	15.8	1.247

Surface: 9-5/8" surface casing will be cemented from setting depth (2025' MD) to surface and topped out with premium cement if necessary. Hardware will include a guide shoe, float collar, top plug, and a minimum of one centralizer per joint on the bottom three (3) casing joints. Water or other preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Intermediate: none

Production: 7" production casing will be cemented in two stages from setting depth (7000') to 1500' (at least 500' into the 9-5/8" casing). A minimum of 20 percent silica will be added to the cement slurry if bottom-hole temperature exceeds 230 °F. Slurry volume will be based on calipered hole size plus 20% excess. Hardware will include a guide shoe, float collar, top plug, stage tool, opening plug, closing plug, and centralizers as needed across any pay zones and salt sections. Water and preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Other: - The BLM and UDOGM will be notified at least twenty-four hours prior to running and cementing the surface and production casing strings.

- Actual cement slurries for all casing will be based on final service company recommendations.

- The size, weight, grade, type of thread, number of joints, and footage of all casing run will be recorded in the driller's log. The amount and type of all cement pumped will be recorded in the driller's log.

- Adequate time will be allowed before drilling out for the cement at the casing shoe to achieve a minimum 500-psi compressive strength.

- All casing strings will be tested to 1500 psi before drilling out and if pressure declines by more than 10 percent in 30 minutes, corrective action will be taken.

- Before drilling more than 20 feet of new hole below each casing string, a pressure integrity test of the casing shoe will be performed to a minimum of the mud weight equivalent anticipated to control the pore pressure to the next casing depth or at total depth of the well.

IV. Mud Program:

Depth	Mud Weight (ppg)	Mud Type	Viscosity	Fluid Loss
0 – 2025'	8.4 – 9.2	Fresh Water	26 – 50	N/C to 12 cc
2025' – 7000'	9.2 – 10.5	Salt Mud	36 – 50	N/C to 8 cc

A. After mudding up, slow pump rates will be taken daily and recorded in the driller's log.

B. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume.

C. Abnormal pressures are not anticipated. In the event such pressures are to be anticipated, electronic/mechanical mud monitoring equipment will be in place and include as a minimum; pit volume totalizer (PVT); stroke counter; and flow sensor.

D. A mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

E. The 10M BOPE system is not required for conditions on this well and use of the trip tank is not anticipated.

F. Gas detecting equipment will be installed in the mud return system, and hydrocarbon gas shall be monitored for pore pressure changes. The presence of Hydrogen Sulfide gas is not expected.

G. The need to vent combustible or noncombustible gas is not expected. If needed, a flare system designed to gather and burn all gas will be available. The flare line discharge will be located more than 100 feet from the well head and it will be positioned downwind of the prevailing wind direction. The flare line will have straight lines unless turns are targeted with running tees and it will be anchored. The flare system will have an effective method for ignition.

H. Abnormal pressure is not expected. If abnormal pressure is to be anticipated, a mud-gas separator (gas buster) will be installed and operable beginning at a point at least 500 feet above any anticipated hydrocarbon zone of interest.

V. Evaluation:

A. Mud Log: A mud logging unit will be in operation from a depth of approximately 2025 feet to TD. Samples will be caught, cleaned, bagged, and marked as required.

B. Drill Stem Tests: There is no DST planned.

C. Coring: There are no cores planned.

D. Wireline Logs: Wireline logs will be run as hole conditions allow from total depth to surface casing to assist in determining lithology and potential for hydrocarbon recovery. The logging tools will at a minimum survey resistivity, gamma radiation, and sonic velocity.

VI. Expected Bottom-Hole Pressure and Abnormal Conditions:

A. Hydrogen Sulfide: Hydrogen Sulfide (H_2S) gas is not expected in the geologic formations to be penetrated by this well.

B. Pressure: No abnormally pressured zones are expected in this well. The pressure gradient for all potentially productive formations is expected to be approximately 0.46 psi/ft.

C. Temperature: Bottom-hole temperature at TD is expected to be approximately 190 °F.

end

WOLVERINE GAS & OIL COMPANY

Location: UTAH
Field: SEVIER COUNTY
Facility: SEC.20-T23S-R1W
Slot: Wolverine State 17-10 193'FNL & 2136'FWL
Well: Wolverine State 17-10
Wellbore: Wolverine State 17-10 PWB

BAKER HUGHES INTEQ

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	44.854	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	44.854	1000.00	0.00	0.00	0.00	0.00
Build (S)	1900.00	18.000	44.854	1885.27	99.40	98.89	2.00	140.21
End of Tangent (S)	5584.50	18.000	44.854	5389.44	906.53	901.94	0.00	1278.79
Drop (S)	6484.50	0.000	44.854	6274.71	1005.93	1000.83	2.00	1419.00
End of Tangent	6909.80	0.000	44.854	6700.00	1005.93	1000.83	0.00	1419.00

Location Information

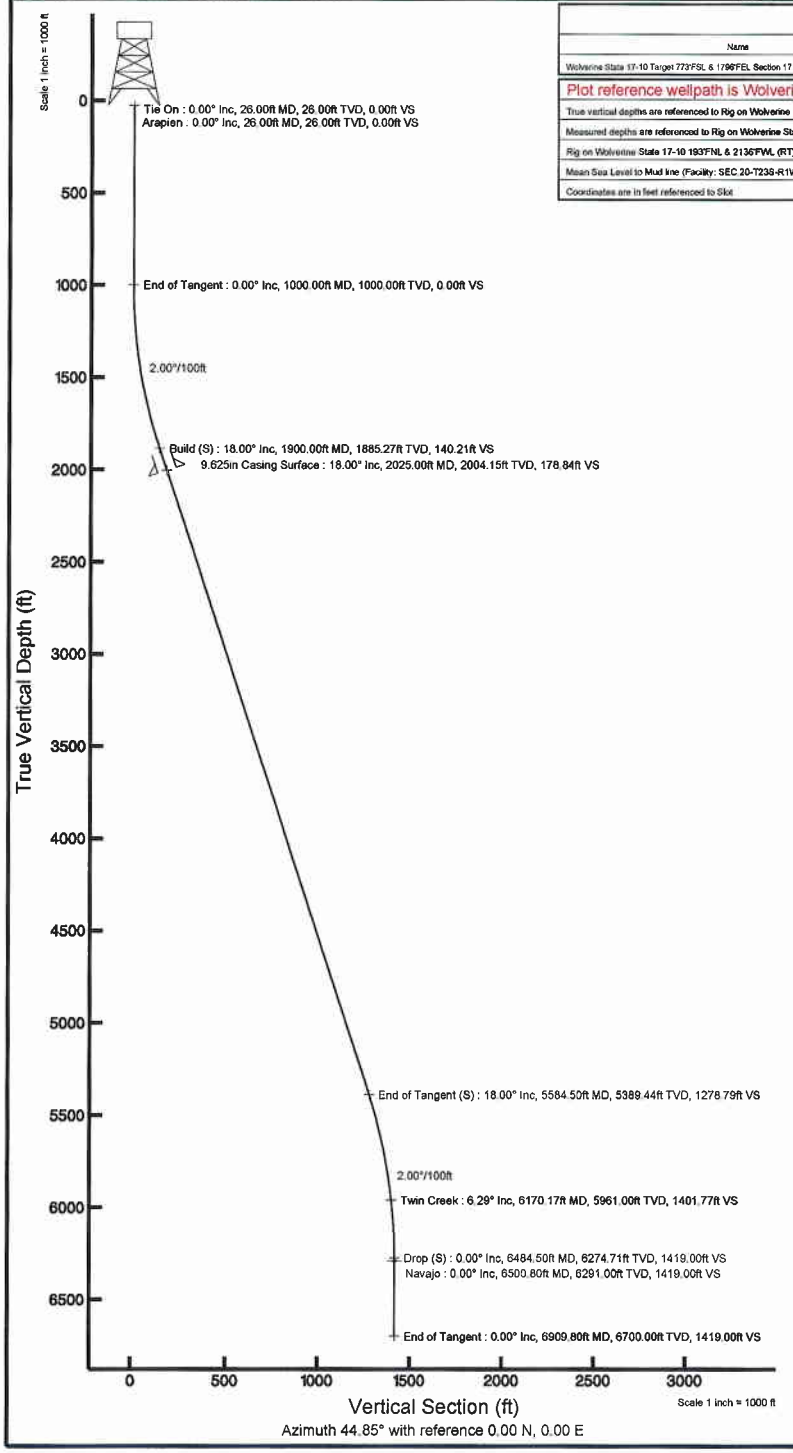
Facility Name			Grid East (ft)	Grid North (ft)	Latitude	Longitude
SEC.20-T23S-R1W			1516743.473	6730039.327	38°47'40.985"N	111°56'01.992"W
Slot	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine State 17-10 193'FNL & 2136'FWL	0.00	0.00	1516743.473	6730039.327	38°47'40.985"N	111°56'01.992"W
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mud line (Facility: SEC.20-T23S-R1W)					5891ft	
Mean Sea Level to Mud line (Facility: SEC.20-T23S-R1W)					0ft	
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level					5891ft	

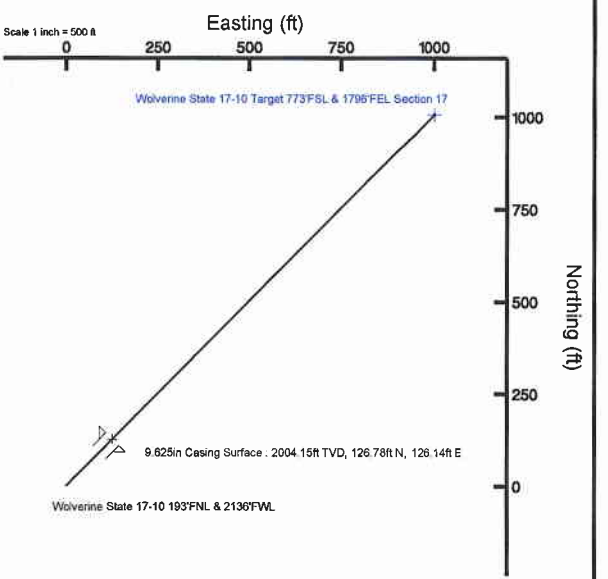
Targets

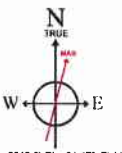
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine State 17-10 Target 773'FSL & 1795'FEL Section 17		6291.00	1005.93	1000.83	1517749.24	6731040.45	38°47'50.931"N	111°55'48.350"W

Plot reference wellpath is Wolverine State 17-10 PWP Rev-B.0

True vertical depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), feet
Measured depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	North Reference: True north
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level: 5891 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: SEC.20-T23S-R1W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdanm on 12/29/2008







BGGM (1945.0 to 2010.0) Dip: 64.47° Field: 51577.4 nT
Magnetic North is 12.18 degrees East of True North (at 12/29/2008)

To correct azimuth from Magnetic to True add 12.18 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 12.18 = 102.18

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine State 17-10 193'FNL & 2136'FWL**
Area	**UTAH**	Well	**Wolverine State 17-10**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine State 17-10 PWB**
Facility	**SEC.20-T23S-R1W**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / Lambert Utah State Planes, Central Zone (4302), feet**	Software System	**WellArchitect® 2.0**
North Reference	**True**	User	**Cookdanm**
Scale	**1.00006**	Report Generated	**12/29/2008 at 3:17:28 PM**
Convergence at slot	**0.28° West**	Database/Source file	**WellArchitect_Denver/Wolverine_State_17-10_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[ft]**	**Northing[ft]**	**Latitude**	**Longitude**
Slot Location	0.00	0.00	1516743.47	6730039.33	**38°47'40.989"N**	**111°56'01.992"W**
Facility Reference Pt			1516743.47	6730039.33	**38°47'40.989"N**	**111°56'01.992"W**
Field Reference Pt			1516137.40	6732230.79	**38°48'02.619"N**	**111°56'09.781"W**

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Facility Vertical Datum	**5891.00**
Horizontal Reference Pt	**Slot**	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level	**5891.00**
Vertical Reference Pt	**Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)**	Section Origin	**N 0.00,**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**44.85°**

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	44.854	0.00	0.00	0.00	0.00	0.00	
26.00	0.000	44.854	26.00	0.00	0.00	0.00	0.00	Tie On; Arapien
126.00†	0.000	44.854	126.00	0.00	0.00	0.00	0.00	
226.00†	0.000	44.854	226.00	0.00	0.00	0.00	0.00	
326.00†	**0.000**	**44.854**	**326.00**	**0.00**	**0.00**	**0.00**	**0.00**	
426.00†	0.000	44.854	426.00	0.00	0.00	0.00	0.00	
526.00†	0.000	44.854	526.00	0.00	0.00	0.00	0.00	
626.00†	0.000	44.854	626.00	0.00	0.00	0.00	0.00	
726.00†	0.000	44.854	726.00	0.00	0.00	0.00	0.00	
826.00†	**0.000**	**44.854**	**826.00**	**0.00**	**0.00**	**0.00**	**0.00**	
926.00†	0.000	44.854	926.00	0.00	0.00	0.00	0.00	
1000.00	0.000	44.854	1000.00	0.00	0.00	0.00	0.00	End of Tangent
1026.00†	0.520	44.854	1026.00	0.12	0.08	0.08	2.00	
1126.00†	2.520	44.854	1125.96	2.77	1.96	1.95	2.00	
1226.00†	**4.520**	**44.854**	**1225.77**	**8.91**	**6.32**	**6.28**	**2.00**	
1326.00†	6.520	44.854	1325.30	18.53	13.13	13.07	2.00	
1426.00†	8.520	44.854	1424.43	31.62	22.41	22.30	2.00	
1526.00†	10.520	44.854	1523.05	48.15	34.14	33.96	2.00	
1626.00†	12.520	44.854	1621.03	68.12	48.29	48.05	2.00	
1726.00†	**14.520**	**44.854**	**1718.25**	**91.50**	**64.87**	**64.54**	**2.00**	
1826.00†	16.520	44.854	1814.60	118.26	83.83	83.41	2.00	
1900.00	18.000	44.854	1885.27	140.21	99.40	98.89	2.00	Build (S)
1926.00†	18.000	44.854	1910.00	148.25	105.09	104.56	0.00	
2026.00†	18.000	44.854	2005.10	179.15	127.00	126.36	0.00	
2126.00†	**18.000**	**44.854**	**2100.21**	**210.05**	**148.91**	**148.15**	**0.00**	
2226.00†	18.000	44.854	2195.31	240.95	170.81	169.95	0.00	
2326.00†	18.000	44.854	2290.42	271.85	192.72	191.74	0.00	
2426.00†	18.000	44.854	2385.52	302.76	214.62	213.54	0.00	
2526.00†	18.000	44.854	2480.63	333.66	236.53	235.33	0.00	
2626.00†	**18.000**	**44.854**	**2575.74**	**364.56**	**258.44**	**257.13**	**0.00**	

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2726.00†	18.000	44.854	2670.84	395.46	280.34	278.92	0.00	
2826.00†	18.000	44.854	2765.95	426.36	302.25	300.72	0.00	
2926.00†	18.000	44.854	2861.05	457.26	324.15	322.51	0.00	
3026.00†	18.000	44.854	2956.16	488.17	346.06	344.31	0.00	
3126.00†	**18.000**	**44.854**	**3051.26**	**519.07**	**367.97**	**366.10**	**0.00**	
3226.00†	18.000	44.854	3146.37	549.97	389.87	387.90	0.00	
3326.00†	18.000	44.854	3241.48	580.87	411.78	409.69	0.00	
3426.00†	18.000	44.854	3336.58	611.77	433.69	431.49	0.00	
3526.00†	18.000	44.854	3431.69	642.67	455.59	453.28	0.00	
3626.00†	**18.000**	**44.854**	**3526.79**	**673.58**	**477.50**	**475.08**	**0.00**	
3726.00†	18.000	44.854	3621.90	704.48	499.40	496.87	0.00	
3826.00†	18.000	44.854	3717.00	735.38	521.31	518.67	0.00	
3926.00†	18.000	44.854	3812.11	766.28	543.22	540.46	0.00	
4026.00†	18.000	44.854	3907.21	797.18	565.12	562.26	0.00	
4126.00†	**18.000**	**44.854**	**4002.32**	**828.08**	**587.03**	**584.05**	**0.00**	
4226.00†	18.000	44.854	4097.43	858.99	608.94	605.85	0.00	
4326.00†	18.000	44.854	4192.53	889.89	630.84	627.65	0.00	
4426.00†	18.000	44.854	4287.64	920.79	652.75	649.44	0.00	
4526.00†	18.000	44.854	4382.74	951.69	674.65	671.24	0.00	
4626.00†	**18.000**	**44.854**	**4477.85**	**982.59**	**696.56**	**693.03**	**0.00**	
4726.00†	18.000	44.854	4572.95	1013.49	718.47	714.83	0.00	
4826.00†	18.000	44.854	4668.06	1044.40	740.37	736.62	0.00	
4926.00†	18.000	44.854	4763.17	1075.30	762.28	758.42	0.00	
5026.00†	18.000	44.854	4858.27	1106.20	784.19	780.21	0.00	
5126.00†	**18.000**	**44.854**	**4953.38**	**1137.10**	**806.09**	**802.01**	**0.00**	
5226.00†	18.000	44.854	5048.48	1168.00	828.00	823.80	0.00	
5326.00†	18.000	44.854	5143.59	1198.90	849.90	845.60	0.00	
5426.00†	18.000	44.854	5238.69	1229.81	871.81	867.39	0.00	
5526.00†	18.000	44.854	5333.80	1260.71	893.72	889.19	0.00	
5584.50	**18.000**	**44.854**	**5389.44**	**1278.79**	**906.53**	**901.94**	**0.00**	End of Tangent (S)

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5626.00†	17.170	44.854	5429.00	1291.32	915.42	910.78	2.00	
5726.00†	15.170	44.854	5525.04	1319.17	935.16	930.42	2.00	
5826.00†	13.170	44.854	5621.99	1343.65	952.51	947.69	2.00	
5926.00†	11.170	44.854	5719.74	1364.73	967.46	962.56	2.00	
6026.00†	**9.170**	**44.854**	**5818.16**	**1382.39**	**979.98**	**975.01**	**2.00**	
6126.00†	7.170	44.854	5917.14	1396.60	990.05	985.03	2.00	
6170.17†	6.287	44.854	5961.00	1401.77	993.72	988.68	2.00	Twin Creek
6226.00†	5.170	44.854	6016.56	1407.34	997.67	992.61	2.00	
6326.00†	3.170	44.854	6116.29	1414.62	1002.82	997.74	2.00	
6426.00†	**1.170**	**44.854**	**6216.21**	**1418.40**	**1005.51**	**1000.41**	**2.00**	
6484.50	0.000	44.854	**6274.71**[1]	1419.00	**1005.93**	**1000.83**	2.00	Drop (S)
6500.80†	0.000	44.854	6291.00	1419.00	1005.93	1000.83	0.00	Navajo
6526.00†	0.000	44.854	6316.20	1419.00	1005.93	1000.83	0.00	
6626.00†	0.000	44.854	6416.20	1419.00	1005.93	1000.83	0.00	
6726.00†	**0.000**	**44.854**	**6516.20**	**1419.00**	**1005.93**	**1000.83**	**0.00**	
6826.00†	0.000	44.854	6616.20	1419.00	1005.93	1000.83	0.00	
6909.80	0.000	44.854	6700.00	1419.00	1005.93	1000.83	0.00	End of Tangent

HOLE & CASING SECTIONS
Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP Rev-B.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	26.00	2025.00	1999.00	26.00	2004.15	0.00	0.00	126.78	126.14

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Shape
1) Wolverine State 17-10 Target 773'FSL & 1796'FEL Section 17		6291.00	1005.93	1000.83	1517749.24	6731040.45	38°47'50.931"N	111°55'49.350"W	point

SURVEY PROGRAM Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP Rev-B.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	6909.80	MTC (Collar, post-2000) (Standard)		Wolverine State 17-10 PWB

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine State 17-10 193'FNL & 2136'FWL**
Area	**UTAH**	Well	**Wolverine State 17-10**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine State 17-10 PWB**
Facility	**SEC.20-T23S-R1W**		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
26.00	0.000	44.854	26.00	Arapien
6170.17	6.287	44.854	5961.00	Twin Creek
6500.80	0.000	44.854	6291.00	Navajo

WOLVERINE GAS & OIL COMPANY

Location: UTAH
Field: SEVIER COUNTY
Facility: SEC.20-T23S-R1W

Slot: Wolverine State 17-10 193'FNL & 2136'FWL
Well: Wolverine State 17-10
Wellbore: Wolverine State 17-10 PWB

BAKER HUGHES
INTEQ

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	44.854	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	44.854	1000.00	0.00	0.00	0.00	0.00
Build (S)	1900.00	18.000	44.854	1885.27	99.40	98.89	2.00	140.21
End of Tangent (S)	5584.50	18.000	44.854	5389.44	906.53	901.94	0.00	1278.79
Drop (S)	6484.50	0.000	44.854	6274.71	1005.93	1000.83	2.00	1419.00
End of Tangent	6909.80	0.000	44.854	6700.00	1005.93	1000.83	0.00	1419.00

Location Information

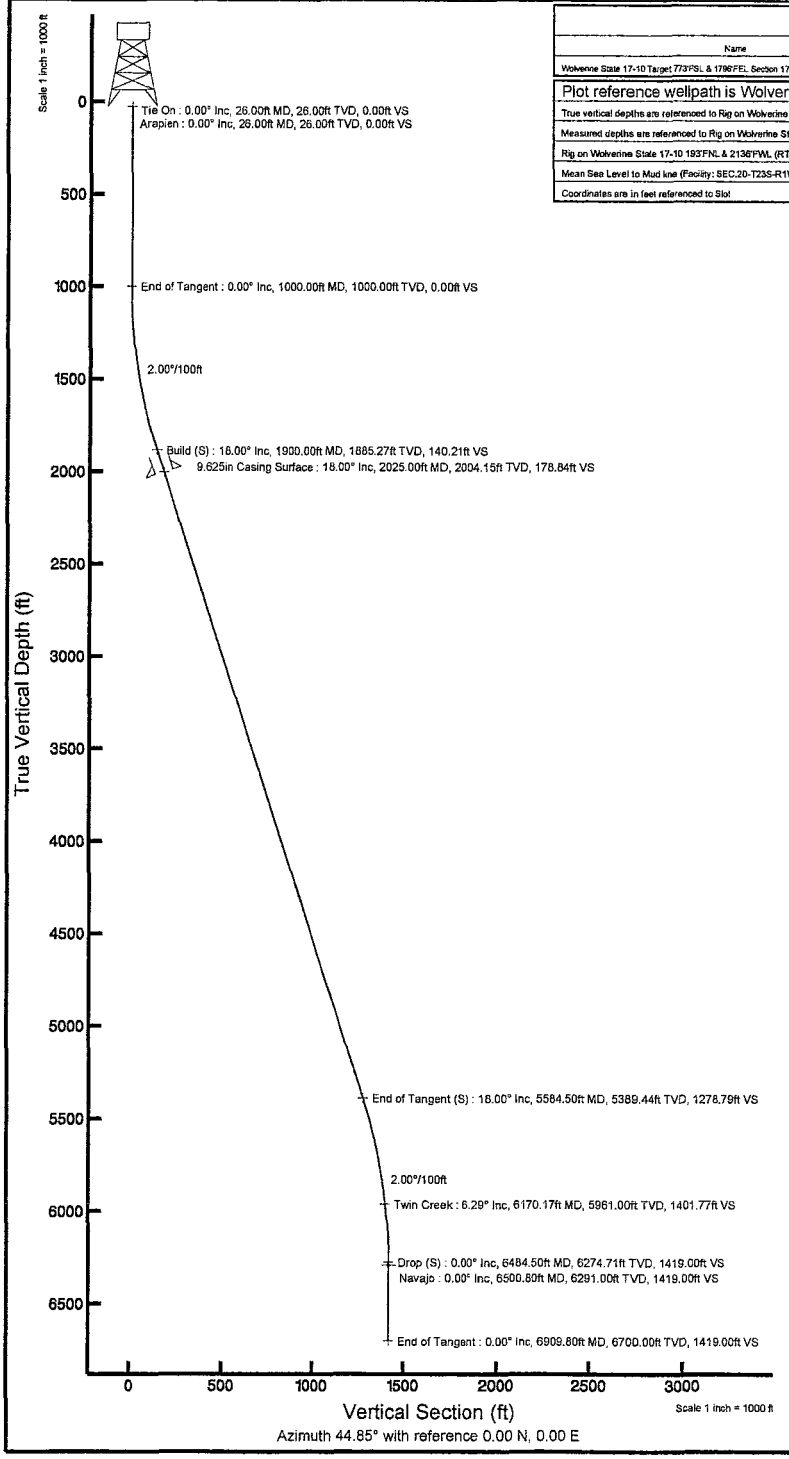
Facility Name			Grid East (ft)	Grid North (ft)	Latitude	Longitude
SEC.20-T23S-R1W			1516743.473	6730039.327	38°47'40.989"N	111°56'01.992"W
Slot	**Local N (ft)**	**Local E (ft)**	**Grid East (ft)**	**Grid North (ft)**	**Latitude**	**Longitude**
Wolverine State 17-10 193'FNL & 2136'FWL	0.00	0.00	1516743.473	6730039.327	38°47'40.989"N	111°56'01.992"W
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mud line (Facility: SEC.20-T23S-R1W)					5891ft	
Mean Sea Level to Mud line (Facility: SEC.20-T23S-R1W)					0ft	
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level					5891ft	

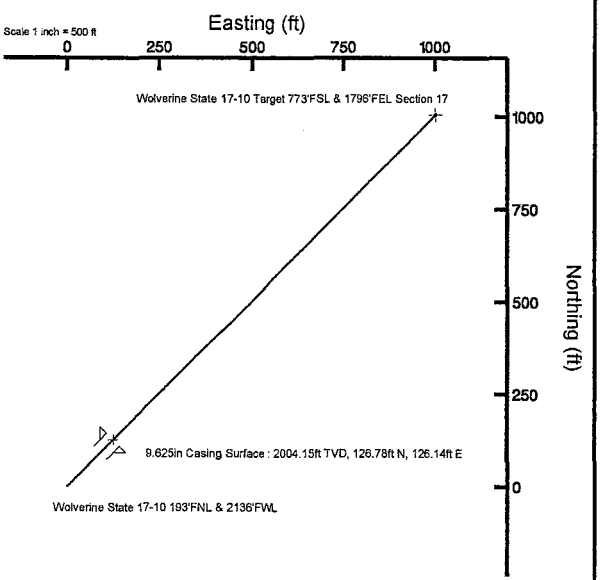
Targets

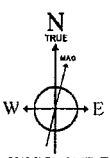
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine State 17-10 Target 773'FSL & 1796'FEL Section 17		6291.00	1005.93	1000.83	1517749.24	6731040.45	38°47'50.931"N	111°55'49.350"W

Plot reference wellpath is Wolverine State 17-10 PWP Rev-B.0

True vertical depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), feet
Measured depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	North Reference: True north
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level: 5891 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: SEC.20-T23S-R1W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdanm on 12/29/2008







BGGM (1945.0 to 2010.0) Dip: 64.47° Field: 51577.4 nT
Magnetic North is 12.18 degrees East of True North (at 12/29/2008)

To correct azimuth from Magnetic to True add 12.18 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 12.18 = 102.18

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Utah State Planes, Central Zone (4302), feet	Software System	WellArchitect® 2.0
North Reference	True	User	Cookdanm
Scale	1.00006	Report Generated	12/29/2008 at 3:17:28 PM
Convergence at slot	0.28° West	Database/Source file	WellArchitect_Denver/Wolverine_State_17-10_PWB.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[ft]	Northing[ft]	Latitude	Longitude
Slot Location	0.00	0.00	1516743.47	6730039.33	38°47'40.989"N	111°56'01.992"W
Facility Reference Pt			1516743.47	6730039.33	38°47'40.989"N	111°56'01.992"W
Field Reference Pt			1516137.40	6732230.79	38°48'02.619"N	111°56'09.781"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Facility Vertical Datum	5891.00
Horizontal Reference Pt	Slot	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level	5891.00
Vertical Reference Pt	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Section Origin	N 0.00,
Field Vertical Reference	Mean Sea Level	Section Azimuth	44.85°

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	44.854	0.00	0.00	0.00	0.00	0.00	
26.00	0.000	44.854	26.00	0.00	0.00	0.00	0.00	Tie On; Arapien
126.00†	0.000	44.854	126.00	0.00	0.00	0.00	0.00	
226.00†	0.000	44.854	226.00	0.00	0.00	0.00	0.00	
326.00†	0.000	44.854	326.00	0.00	0.00	0.00	0.00	
426.00†	0.000	44.854	426.00	0.00	0.00	0.00	0.00	
526.00†	0.000	44.854	526.00	0.00	0.00	0.00	0.00	
626.00†	0.000	44.854	626.00	0.00	0.00	0.00	0.00	
726.00†	0.000	44.854	726.00	0.00	0.00	0.00	0.00	
826.00†	0.000	44.854	826.00	0.00	0.00	0.00	0.00	
926.00†	0.000	44.854	926.00	0.00	0.00	0.00	0.00	
1000.00	0.000	44.854	1000.00	0.00	0.00	0.00	0.00	End of Tangent
1026.00†	0.520	44.854	1026.00	0.12	0.08	0.08	2.00	
1126.00†	2.520	44.854	1125.96	2.77	1.96	1.95	2.00	
1226.00†	4.520	44.854	1225.77	8.91	6.32	6.28	2.00	
1326.00†	6.520	44.854	1325.30	18.53	13.13	13.07	2.00	
1426.00†	8.520	44.854	1424.43	31.62	22.41	22.30	2.00	
1526.00†	10.520	44.854	1523.05	48.15	34.14	33.96	2.00	
1626.00†	12.520	44.854	1621.03	68.12	48.29	48.05	2.00	
1726.00†	14.520	44.854	1718.25	91.50	64.87	64.54	2.00	
1826.00†	16.520	44.854	1814.60	118.26	83.83	83.41	2.00	
1900.00	18.000	44.854	1885.27	140.21	99.40	98.89	2.00	Build (S)
1926.00†	18.000	44.854	1910.00	148.25	105.09	104.56	0.00	
2026.00†	18.000	44.854	2005.10	179.15	127.00	126.36	0.00	
2126.00†	18.000	44.854	2100.21	210.05	148.91	148.15	0.00	
2226.00†	18.000	44.854	2195.31	240.95	170.81	169.95	0.00	
2326.00†	18.000	44.854	2290.42	271.85	192.72	191.74	0.00	
2426.00†	18.000	44.854	2385.52	302.76	214.62	213.54	0.00	
2526.00†	18.000	44.854	2480.63	333.66	236.53	235.33	0.00	
2626.00†	18.000	44.854	2575.74	364.56	258.44	257.13	0.00	

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2726.00†	18.000	44.854	2670.84	395.46	280.34	278.92	0.00	
2826.00†	18.000	44.854	2765.95	426.36	302.25	300.72	0.00	
2926.00†	18.000	44.854	2861.05	457.26	324.15	322.51	0.00	
3026.00†	18.000	44.854	2956.16	488.17	346.06	344.31	0.00	
3126.00†	18.000	44.854	3051.26	519.07	367.97	366.10	0.00	
3226.00†	18.000	44.854	3146.37	549.97	389.87	387.90	0.00	
3326.00†	18.000	44.854	3241.48	580.87	411.78	409.69	0.00	
3426.00†	18.000	44.854	3336.58	611.77	433.69	431.49	0.00	
3526.00†	18.000	44.854	3431.69	642.67	455.59	453.28	0.00	
3626.00†	18.000	44.854	3526.79	673.58	477.50	475.08	0.00	
3726.00†	18.000	44.854	3621.90	704.48	499.40	496.87	0.00	
3826.00†	18.000	44.854	3717.00	735.38	521.31	518.67	0.00	
3926.00†	18.000	44.854	3812.11	766.28	543.22	540.46	0.00	
4026.00†	18.000	44.854	3907.21	797.18	565.12	562.26	0.00	
4126.00†	18.000	44.854	4002.32	828.08	587.03	584.05	0.00	
4226.00†	18.000	44.854	4097.43	858.99	608.94	605.85	0.00	
4326.00†	18.000	44.854	4192.53	889.89	630.84	627.65	0.00	
4426.00†	18.000	44.854	4287.64	920.79	652.75	649.44	0.00	
4526.00†	18.000	44.854	4382.74	951.69	674.65	671.24	0.00	
4626.00†	18.000	44.854	4477.85	982.59	696.56	693.03	0.00	
4726.00†	18.000	44.854	4572.95	1013.49	718.47	714.83	0.00	
4826.00†	18.000	44.854	4668.06	1044.40	740.37	736.62	0.00	
4926.00†	18.000	44.854	4763.17	1075.30	762.28	758.42	0.00	
5026.00†	18.000	44.854	4858.27	1106.20	784.19	780.21	0.00	
5126.00†	18.000	44.854	4953.38	1137.10	806.09	802.01	0.00	
5226.00†	18.000	44.854	5048.48	1168.00	828.00	823.80	0.00	
5326.00†	18.000	44.854	5143.59	1198.90	849.90	845.60	0.00	
5426.00†	18.000	44.854	5238.69	1229.81	871.81	867.39	0.00	
5526.00†	18.000	44.854	5333.80	1260.71	893.72	889.19	0.00	
5584.50	18.000	44.854	5389.44	1278.79	906.53	901.94	0.00	End of Tangent (S)

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5626.00†	17.170	44.854	5429.00	1291.32	915.42	910.78	2.00	
5726.00†	15.170	44.854	5525.04	1319.17	935.16	930.42	2.00	
5826.00†	13.170	44.854	5621.99	1343.65	952.51	947.69	2.00	
5926.00†	11.170	44.854	5719.74	1364.73	967.46	962.56	2.00	
6026.00†	9.170	44.854	5818.16	1382.39	979.98	975.01	2.00	
6126.00†	7.170	44.854	5917.14	1396.60	990.05	985.03	2.00	
6170.17†	6.287	44.854	5961.00	1401.77	993.72	988.68	2.00	Twin Creek
6226.00†	5.170	44.854	6016.56	1407.34	997.67	992.61	2.00	
6326.00†	3.170	44.854	6116.29	1414.62	1002.82	997.74	2.00	
6426.00†	1.170	44.854	6216.21	1418.40	1005.51	1000.41	2.00	
6484.50	0.000	44.854	6274.71[1]	1419.00	1005.93	1000.83	2.00	Drop (S)
6500.80†	0.000	44.854	6291.00	1419.00	1005.93	1000.83	0.00	Navajo
6526.00†	0.000	44.854	6316.20	1419.00	1005.93	1000.83	0.00	
6626.00†	0.000	44.854	6416.20	1419.00	1005.93	1000.83	0.00	
6726.00†	0.000	44.854	6516.20	1419.00	1005.93	1000.83	0.00	
6826.00†	0.000	44.854	6616.20	1419.00	1005.93	1000.83	0.00	
6909.80	0.000	44.854	6700.00	1419.00	1005.93	1000.83	0.00	End of Tangent

HOLE & CASING SECTIONS
Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP Rev-B.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	26.00	2025.00	1999.00	26.00	2004.15	0.00	0.00	126.78	126.14

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Shape
1) Wolverine State 17-10 Target 773'FSL & 1796'FEL Section 17		6291.00	1005.93	1000.83	1517749.24	6731040.45	38°47'50.931"N	111°55'49.350"W	point

SURVEY PROGRAM Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP Rev-B.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	6909.80	MTC (Collar, post-2000) (Standard)		Wolverine State 17-10 PWB

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine State 17-10 193'FNL & 2136'FWL**
Area	**UTAH**	Well	**Wolverine State 17-10**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine State 17-10 PWB**
Facility	**SEC.20-T23S-R1W**		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
26.00	0.000	44.854	26.00	Arapien
6170.17	6.287	44.854	5961.00	Twin Creek
6500.80	0.000	44.854	6291.00	Navajo

WOLVERINE GAS & OIL COMPANY

Location: UTAH
Field: SEVIER COUNTY
Facility: SEC.20-T23S-R1W

Slot: Wolverine State 17-10 193'FNL & 2136'FWL
Well: Wolverine State 17-10
Wellbore: Wolverine State 17-10 PWB

BAKER HUGHES
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Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	44.854	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	44.854	1000.00	0.00	0.00	0.00	0.00
Build (S)	1900.00	18.000	44.854	1885.27	99.40	98.89	2.00	140.21
End of Tangent (S)	5584.50	18.000	44.854	5389.44	906.53	901.94	0.00	1278.79
Drop (S)	6484.50	0.000	44.854	6274.71	1005.93	1000.83	2.00	1419.00
End of Tangent	6909.80	0.000	44.854	6700.00	1005.93	1000.83	0.00	1419.00

Location Information

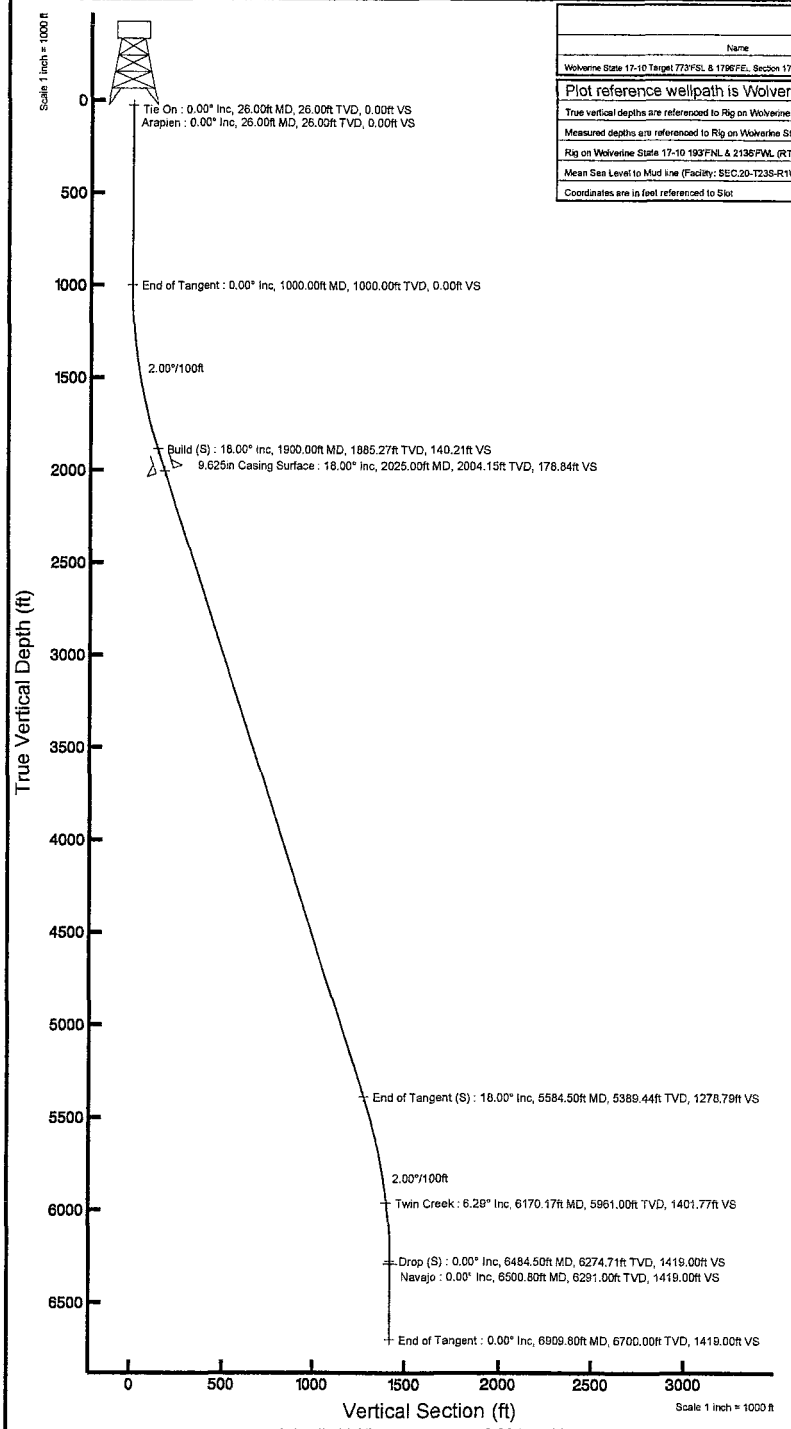
Facility Name			Grid East (ft)	Grid North (ft)	Latitude	Longitude
SEC.20-T23S-R1W			1516743.473	6730039.327	38°47'40.988"N	111°56'01.992"W
Slot	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine State 17-10 193'FNL & 2136'FWL	0.00	0.00	1516743.473	6730039.327	38°47'40.988"N	111°56'01.992"W
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mud line (Facility: SEC.20-T23S-R1W)					5891ft	
Mean Sea Level to Mud line (Facility: SEC.20-T23S-R1W)					0ft	
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level					5891ft	

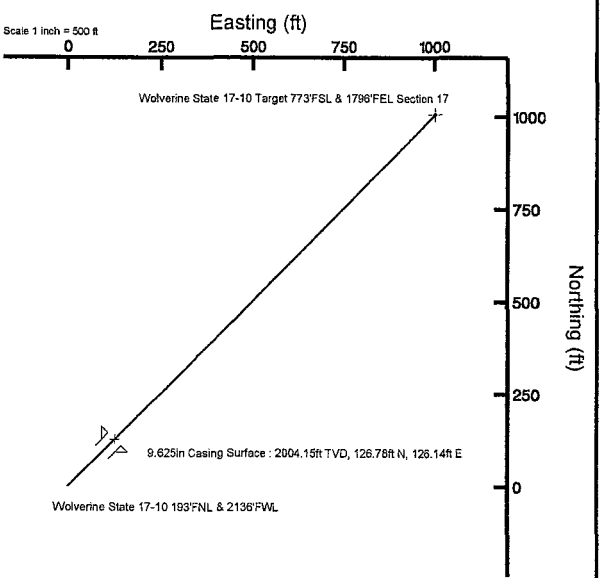
Targets

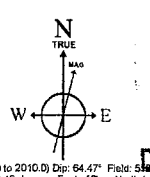
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine State 17-10 Target 773'FSL & 1796'FEL Section 17		6291.00	1005.93	1000.83	1517749.24	6731040.45	38°47'50.831"N	111°55'48.350"W

Plot reference wellpath is Wolverine State 17-10 PWP Rev-B.0

True vertical depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), feet
Measured depths are referenced to Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	North Reference: True north
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level: 5891 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: SEC.20-T23S-R1W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdanm on 12/29/2008







BGGM (1945.0 to 2010.0) Dip: 64.47° Field: 53977nT
Magnetic North is 12.18 degrees East of True North (at 12/29/2008)

To correct azimuth from Magnetic to True add 12.18 degrees
For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 12.18 = 102.18

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DIV. OF OIL, GAS & MINING

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Utah State Planes, Central Zone (4302), feet	Software System	WellArchitect® 2.0
North Reference	True	User	Cookdanm
Scale	1.00006	Report Generated	12/29/2008 at 3:17:28 PM
Convergence at slot	0.28° West	Database/Source file	WellArchitect_Denver/Wolverine_State_17-10_PWB.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[ft]	Northing[ft]	Latitude	Longitude
Slot Location	0.00	0.00	1516743.47	6730039.33	38°47'40.989"N	111°56'01.992"W
Facility Reference Pt			1516743.47	6730039.33	38°47'40.989"N	111°56'01.992"W
Field Reference Pt			1516137.40	6732230.79	38°48'02.619"N	111°56'09.781"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Facility Vertical Datum	5891.00
Horizontal Reference Pt	Slot	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT) to Mean Sea Level	5891.00
Vertical Reference Pt	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on Wolverine State 17-10 193'FNL & 2136'FWL (RT)	Section Origin	N 0.00,
Field Vertical Reference	Mean Sea Level	Section Azimuth	44.85°

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
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Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	44.854	0.00	0.00	0.00	0.00	0.00	
26.00	0.000	44.854	26.00	0.00	0.00	0.00	0.00	Tie On; Arapien
126.00†	0.000	44.854	126.00	0.00	0.00	0.00	0.00	
226.00†	0.000	44.854	226.00	0.00	0.00	0.00	0.00	
326.00†	0.000	44.854	326.00	0.00	0.00	0.00	0.00	
426.00†	0.000	44.854	426.00	0.00	0.00	0.00	0.00	
526.00†	0.000	44.854	526.00	0.00	0.00	0.00	0.00	
626.00†	0.000	44.854	626.00	0.00	0.00	0.00	0.00	
726.00†	0.000	44.854	726.00	0.00	0.00	0.00	0.00	
826.00†	0.000	44.854	826.00	0.00	0.00	0.00	0.00	
926.00†	0.000	44.854	926.00	0.00	0.00	0.00	0.00	
1000.00	0.000	44.854	1000.00	0.00	0.00	0.00	0.00	End of Tangent
1026.00†	0.520	44.854	1026.00	0.12	0.08	0.08	2.00	
1126.00†	2.520	44.854	1125.96	2.77	1.96	1.95	2.00	
1226.00†	4.520	44.854	1225.77	8.91	6.32	6.28	2.00	
1326.00†	6.520	44.854	1325.30	18.53	13.13	13.07	2.00	
1426.00†	8.520	44.854	1424.43	31.62	22.41	22.30	2.00	
1526.00†	10.520	44.854	1523.05	48.15	34.14	33.96	2.00	
1626.00†	12.520	44.854	1621.03	68.12	48.29	48.05	2.00	
1726.00†	14.520	44.854	1718.25	91.50	64.87	64.54	2.00	
1826.00†	16.520	44.854	1814.60	118.26	83.83	83.41	2.00	
1900.00	18.000	44.854	1885.27	140.21	99.40	98.89	2.00	Build (S)
1926.00†	18.000	44.854	1910.00	148.25	105.09	104.56	0.00	
2026.00†	18.000	44.854	2005.10	179.15	127.00	126.36	0.00	
2126.00†	18.000	44.854	2100.21	210.05	148.91	148.15	0.00	
2226.00†	18.000	44.854	2195.31	240.95	170.81	169.95	0.00	
2326.00†	18.000	44.854	2290.42	271.85	192.72	191.74	0.00	
2426.00†	18.000	44.854	2385.52	302.76	214.62	213.54	0.00	
2526.00†	18.000	44.854	2480.63	333.66	236.53	235.33	0.00	
2626.00†	18.000	44.854	2575.74	364.56	258.44	257.13	0.00	

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 193'FNL & 2136'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2726.00†	18.000	44.854	2670.84	395.46	280.34	278.92	0.00	
2826.00†	18.000	44.854	2765.95	426.36	302.25	300.72	0.00	
2926.00†	18.000	44.854	2861.05	457.26	324.15	322.51	0.00	
3026.00†	18.000	44.854	2956.16	488.17	346.06	344.31	0.00	
3126.00†	18.000	44.854	3051.26	519.07	367.97	366.10	0.00	
3226.00†	18.000	44.854	3146.37	549.97	389.87	387.90	0.00	
3326.00†	18.000	44.854	3241.48	580.87	411.78	409.69	0.00	
3426.00†	18.000	44.854	3336.58	611.77	433.69	431.49	0.00	
3526.00†	18.000	44.854	3431.69	642.67	455.59	453.28	0.00	
3626.00†	18.000	44.854	3526.79	673.58	477.50	475.08	0.00	
3726.00†	18.000	44.854	3621.90	704.48	499.40	496.87	0.00	
3826.00†	18.000	44.854	3717.00	735.38	521.31	518.67	0.00	
3926.00†	18.000	44.854	3812.11	766.28	543.22	540.46	0.00	
4026.00†	18.000	44.854	3907.21	797.18	565.12	562.26	0.00	
4126.00†	18.000	44.854	4002.32	828.08	587.03	584.05	0.00	
4226.00†	18.000	44.854	4097.43	858.99	608.94	605.85	0.00	
4326.00†	18.000	44.854	4192.53	889.89	630.84	627.65	0.00	
4426.00†	18.000	44.854	4287.64	920.79	652.75	649.44	0.00	
4526.00†	18.000	44.854	4382.74	951.69	674.65	671.24	0.00	
4626.00†	18.000	44.854	4477.85	982.59	696.56	693.03	0.00	
4726.00†	18.000	44.854	4572.95	1013.49	718.47	714.83	0.00	
4826.00†	18.000	44.854	4668.06	1044.40	740.37	736.62	0.00	
4926.00†	18.000	44.854	4763.17	1075.30	762.28	758.42	0.00	
5026.00†	18.000	44.854	4858.27	1106.20	784.19	780.21	0.00	
5126.00†	18.000	44.854	4953.38	1137.10	806.09	802.01	0.00	
5226.00†	18.000	44.854	5048.48	1168.00	828.00	823.80	0.00	
5326.00†	18.000	44.854	5143.59	1198.90	849.90	845.60	0.00	
5426.00†	18.000	44.854	5238.69	1229.81	871.81	867.39	0.00	
5526.00†	18.000	44.854	5333.80	1260.71	893.72	889.19	0.00	
5584.50	18.000	44.854	5389.44	1278.79	906.53	901.94	0.00	End of Tangent (S)

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

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Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10 PWB
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (77 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5626.00†	17.170	44.854	5429.00	1291.32	915.42	910.78	2.00	
5726.00†	15.170	44.854	5525.04	1319.17	935.16	930.42	2.00	
5826.00†	13.170	44.854	5621.99	1343.65	952.51	947.69	2.00	
5926.00†	11.170	44.854	5719.74	1364.73	967.46	962.56	2.00	
6026.00†	9.170	44.854	5818.16	1382.39	979.98	975.01	2.00	
6126.00†	7.170	44.854	5917.14	1396.60	990.05	985.03	2.00	
6170.17†	6.287	44.854	5961.00	1401.77	993.72	988.68	2.00	Twin Creek
6226.00†	5.170	44.854	6016.56	1407.34	997.67	992.61	2.00	
6326.00†	3.170	44.854	6116.29	1414.62	1002.82	997.74	2.00	
6426.00†	1.170	44.854	6216.21	1418.40	1005.51	1000.41	2.00	
6484.50	0.000	44.854	6274.71[1]	1419.00	1005.93	1000.83	2.00	Drop (S)
6500.80†	0.000	44.854	6291.00	1419.00	1005.93	1000.83	0.00	Navajo
6526.00†	0.000	44.854	6316.20	1419.00	1005.93	1000.83	0.00	
6626.00†	0.000	44.854	6416.20	1419.00	1005.93	1000.83	0.00	
6726.00†	0.000	44.854	6516.20	1419.00	1005.93	1000.83	0.00	
6826.00†	0.000	44.854	6616.20	1419.00	1005.93	1000.83	0.00	
6909.80	0.000	44.854	6700.00	1419.00	1005.93	1000.83	0.00	End of Tangent

HOLE & CASING SECTIONS

Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP Rev-B.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	26.00	2025.00	1999.00	26.00	2004.15	0.00	0.00	126.78	126.14

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

BAKER HUGHES INTEQ

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Facility	SEC.20-T23S-R1W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Shape
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SURVEY PROGRAM Ref Wellbore: Wolverine State 17-10 PWB Ref Wellpath: Wolverine State 17-10 PWP Rev-B.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	6909.80	MTC (Collar, post-2000) (Standard)		Wolverine State 17-10 PWB

Planned Wellpath Report

Wolverine State 17-10 PWP Rev-B.0

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Facility	SEC.20-T23S-R1W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
26.00	0.000	44.854	26.00	Arapien
6170.17	6.287	44.854	5961.00	Twin Creek
6500.80	0.000	44.854	6291.00	Navajo

CONFIDENTIAL

EXACT Engineering, Inc.
20 East Fifth St., Suite 310, Tulsa, OK 74103
www.exactengineering.com
(918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

January 5, 2009

CONFIDENTIAL

Mr. Al McKee
Bureau of Land Management
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Drilling Update final - **Wolverine State 17-10 (Covenant Field)**
Sec 20 T23S R01W, Sevier Co, UT API# 43-041-30054

Gentlemen,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please note the following drilling activity for the subject well from June 23, 2008 to Jan 4, 2009. The report dates shown are for the 24-hr day (midnight to midnight).

June 23, 2008
Set & cemented 120' of 20in conductor csg – UDOGM spud date 6/23/2008. Wait on rig

Dec 31, 2008
Resume drlg, drld 12-1/4" hole from 146' to 696'; MW 9.5ppg, VIS 36, FL nc; Svy @ 614' – incl .79, Az 158.45

Jan 1, 2009
Drilled from 696' to 1900'; MW 9.7ppg, VIS 37, FL nc; Svy @ 1828' – incl 16.44, Az 45.25

Jan 2, 2009
Drilled from 1900' to 1990' TD, Run 53 jts 9-5/8" 36ppf K55 csg, set at 1990' TD. Cmtd with 355 sx Varicem (11ppg,3.48cfps,22gps) tailed with 350 sx Premium G (15.8ppg,1.17cfps,5gps). Displace with 151 bbl brine water, full circ, 50 bbls to surface, floats held, WOC.

Jan 3, 2009
Weld on casing head, NU BOPE & test, drill float & 8-3/4" hole to 2000'. Test csg seat to 10.6 ppge. Drill to 2111'

Jan 4, 2009
Drill 2111' to 3186'; MW 10.3, VIS 38, FL 15.0; Svy 3104' incl 17.46 Az 44.55

We respectfully request that the enclosed information remain confidential.

RECEIVED
JAN 07 2009
DIV. OF OIL, GAS & MINING

Sincerely,

Steven R. Hash, P.E.
Petroleum Engineering Consultant

Copies: via email to: SITLA, Wolverine Gas & Oil Co of Utah, LLC, EXACT Engineering, Inc., Lavonne Garrison, Edward Higuera, Helene Bardolph, well file

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML-46605

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER _____

8. WELL NAME and NUMBER: Wolverine State 17-10

2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC

9. API NUMBER: 4304130054

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616 PHONE NUMBER: (616) 458-1150

10. FIELD AND POOL, OR WILDCAT: Covenant Field, Navajo

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 193' FNL, 2136' FWL COUNTY: Sevier

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☑ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
_____	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUED CONFIDENTIAL STATUS REQUESTED

The original APD for this well was approved for drilling a directional hole to a bottom-hole location (BHL) at 596' FSL and 2017' FEL in Section 17, T23S, R1W. Wolverine Gas and Oil Company of Utah, LLC now plans to drill the well to a proposed BHL of 773' FSL and 1796' FEL in Section 17, T23S, R1W. The surface location for the well was not changed . The directional and drilling plans have been modified for the new BHL and proposed changes to the approved APD are also tabulated on the attached document. No modifications to the Surface Use Plan will result from the planned changes to the drilling plan.

Attachments: Changes to Original Drilling Plan, Drilling Plan, Directional Plan, R649-3-11 Exhibit

Approved by the Utah Division of Oil, Gas and Mining

419263X 38.797527
4294511Y -111.929715

Date: 01-12-09

By: _____

NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer

SIGNATURE _____ DATE 12/30/2008

(This space for State use only)

COPY SENT TO OPERATOR
Date: 1.14.2009
Initials: KS

RECEIVED
JAN 07 2009
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

Attachment to Sundry Notice – Changes to Original Drilling Plan

Wolverine Gas and Oil Company of Utah, LLC

Drilling Plan revisions for the: **Wolverine State 17-10**
API No. 43-041-30054
NE/4 NW/4 Sec. 20, T23S, R1W, SLB&M
Sevier County, Utah

	Revised Drilling Plan	Original APD
Location of Well:		
At Surface:	193' FNL, 2136' FWL, Sec. 20	193' FNL, 2136' FWL, Sec. 20
At Navajo Top:	773' FSL, 1796' FEL, Sec. 17	596' FSL, 2017' FEL, Sec. 17
At TD:	773' FSL, 1796' FEL, Sec. 17	596' FSL, 2017' FEL, Sec. 17
Total Depth:	7000' MD, 6790' TVD	6856' MD, 6600' TVD
Elevations:	5865' GL, 5891' KB	5865' GL, 5891' KB

Geology:

Formation	TVD Interval (KB)	MD Interval (KB)
Arapien	26' – 5961'	26' – 6170'
Twin Creek 1	5961' – 6291'	6170' – 6501'
Navajo 1	6291' – 6790'	6501' – 7000'
Total Depth	6790'	7000'

Formation	TVD Interval (KB)	MD Interval (KB)
Arapien	26' – 5961'	26' – 6089'
Twin Creek 1	5961' – 6291'	6089' – 6420'
Navajo 1	6291' – 6700'	6420' – 6830'
Total Depth	6700'	6830'

	Revised Drilling Plan	**Original APD**

Well Control: No changes from original drilling plan.

Casing Program:

Hole Size	Casing Size, Grade, Weight	Depth Interval	Hole Size	Casing Size, Grade, Weight	Depth Interval
30"	20", conductor	0 – 80'	30"	20", conductor	0 – 80'
12.25"	9-5/8", J-55, 36.0#	0 – 2025'	12.25"	9-5/8", J-55, 36.0#	0 – 2025'
8.750"	7", 26.0# N-80 & HCL-80	0 – 7000'	8.750"	7", HCL-80, 23.0 & 26.0#	0 – 6830'

Note: See casing design factors in updated drilling program.

Cementing Program:

Casing	Cement Quantity, Type, Yield, and Slurry Weight	Casing	Cement Quantity, Type, Yield, and Slurry Weight
9-5/8"	220 sks, CBM Lite, 3.548 ft^3/sk, 11.0 ppg 250 sks, Class "G", 1.165 ft^3/sk, 15.8 ppg	9-5/8"	225 sks, CBM Lite, 4.12 ft^3/sk, 10.5 ppg 275 sks, Premium Plus, 1.19 ft^3/sk, 15.6 ppg
7"	90 sks, CBM Light, 3.548 ft^3/sk, 11.0 ppg 450 sks, Class "G", 1.247 ft^3/sk, 15.8 ppg 150 sks, 50/50 Poz, 1.267 ft^3/sk, 14.35 ppg	7"	400 sks, Foamed Elastiseal, 2.08 ft^3/sk, 10.0 ppg 125 sks, Elastiseal, 1.45 ft^3/sk, 14.35 ppg

Note: Revised 7" to be cemented in two stages with Stage 1 being 50/50 Poz cement.

Mud Program:

Depth	Mud Weight (ppg)	Mud Type
0 – 2025'	8.4 – 9.2	Fresh Water
2025' – 7000'	9.2 – 10.5	Salt Mud

Depth	Mud Weight (ppg)	Mud Type
0 – 2025'	8.4 – 9.2	Fresh Water
2025' – 6830'	9.2 – 10.5	Salt Mud

	Revised Drilling Plan	Original APD
Evaluation:		
Mud Logging:	2025' to TD	2025' to TD
Drill Stem Tests:	None	None
Coring:	None	None
Wireline Logs:	TD to 2025'	TD to 2025'
Expected Bottom-Hole Conditions:		
Hydrogen Sulfide:	None expected	None expected
Pressure:	No abnormal pressures (0.46 psi/ft)	No abnormal pressures (0.46 psi/ft)
Temperature:	BHT at TD of 190 °F	BHT at TD of 190 °F
Surface Use Plan:	No changes from original plan.	

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PLAN

Wolverine State 17-10
NE/4 NW/4 Section 20, Township 23 South, Range 1 West, S.L.B & M.
Sevier County, Utah

Plan Summary:

It is planned to drill this confidential development well as a directional bore hole due to surface topography constraints and in accordance with the enclosed directional drilling plan. The well will be drilled to a measured depth of 7000' (6790' TVD) to test the upper thrust of the Twin Creek and Navajo formations. Well path deviation caused by subsurface geologic irregularities is expected to be the primary drilling concern in this area. No abnormal pressure is anticipated.

The planned location is as follows:

Surface Location:	193' FNL, 2136' FWL, Section 20, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ Navajo 1 target	773' FSL, 1796' FEL, Section 17, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ total depth	773' FSL, 1796' FEL, Section 17, T23S, R1W, S.L.B. & M.

Conductor casing will be set at approximately 80 feet and cemented to surface. A 12-1/4" hole will be drilled vertically to approximately 1000' and then deviated at 2 degrees per 100' build rate to 18 degrees hole angle at 2025' (2000' TVD) at which time 9-5/8" surface casing will be set and cemented to surface. An 8-3/4" hole will be drilled at approximately 18 degrees from vertical to approximately 5600' MD and then allowed to drop to vertical to penetrate the Twin Creek and Navajo formations to a well total depth of 7000' (6790' TVD). The well will be logged and 7" production casing will be set and cemented to 1500' (9-5/8" csg shoe @ 2025').

Drilling activities at this well are expected to commence in December 2008.

Well Name: **Wolverine State 17-10**

Surface Location: 193' FNL, 2136' FWL
NE/4 NW/4 Section 20, T23S, R1W, S.L.B. & M.
Sevier County, Utah

TD Bottom-Hole Location: 773' FSL, 1796' FEL; Sec 17, T23S, R1W, S.L.B. & M

Elevations (est): 5865' GL, 5891' KB

I. Geology:

Tops of important geologic markers and anticipated water, oil, gas, and mineral content are as follows:

Formation	TVD Interval (KB)	MD Interval (KB)	Contents	Pressure Gradient
Arapien	26' – 5961'	26' – 6170'		
Twin Creek 1	5961' – 6291'	6170' – 6501'	Oil & water	0.46 psi/ft
Navajo 1	6291' –6790'	6501' – 7000'	Oil & water	0.46 psi/ft
Total Depth	6790'	7000'		

II. Well Control:

The contracted drilling rig has a 10M BOP system but conditions only require a 5M BOP system. BOPE will be in place and tested as a 5M system prior to drilling out the surface casing shoe. See attached schematic of BOPE.

A. The BOPE will, as a minimum, include the following:

Wellhead Equipment (5M Min.):

BOPE Item	Flange Size and Rating
Annular Preventer	13-5/8" 5M
Double Rams (5" Pipe - top, Blind - bottom)	13-5/8" 10M
Drilling Spool w/ 2 side outlets (4" Choke Line, 4" Kill Line)	13-5/8" 10M x 13-5/8" 10M
Single Ram (Pipe)	13-5/8" 10M
DSA	13-5/8" 10M x 11" – 5M
Casing Head (9-5/8" SOW w/ two 2-1/16" SSO's)	11" 5M

Auxiliary Equipment (5M Min.):

BOPE Item
Choke Line with 2 valves (3" minimum)
Kill Line with 2 valves and one check valve (2" Minimum)
2 Chokes with one remotely controlled at a location readily accessible to the driller
Upper and lower kelly cock valves with handles
Safety Valves to fit all drill string connections in use
Inside BOP or float sub
Pressure gauge on choke manifold
Fill-up line above the uppermost preventer
Wear bushing in casing head

B. **Choke manifold** will be functionally equipped and sized at a minimum as shown on the attached diagram. All choke lines will be straight lines unless turns have tee blocks or are targeted with running tees, and all choke lines will be anchored. All valves (except chokes) in the kill line choke manifold and choke line will be full opening and allow straight through flow.

C. **System accumulator** will have sufficient capacity to open the hydraulically-controlled gate valve and close all rams plus the annular preventer (3 ram system will have added 50 percent safety factor to compensate for any fluid loss in the control system or preventers) and retain a minimum pressure of 200 psi above pre-charge on the closing manifold without use of the closing unit pumps. The fluid reservoir capacity shall be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir shall be maintained at the manufacturer's recommendations. The accumulator will have two (2) independent power sources available to close the preventers. Nitrogen bottles may be one of those sources, and if so, will have charge maintained per manufacturer's specifications.

D. **Accumulator pre-charge pressure test** will be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum specified limits. Only nitrogen gas will be used to precharge.

E. **Power for the closing unit pumps** will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure has decreased to the pre-set level.

F. **Accumulator pump capacity** will be such that, with the accumulator system isolated from service, the pumps will be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and retaining a minimum of 200 psi above the specified accumulator pre-charge pressure.

G. **Locking devices**, either manual (i.e., hand wheels) or automatic, will be installed on the ram type preventers. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.

H. **Remote controls** will be readily accessible to the driller and will be capable of both opening and closing all preventers. Master controls shall be at the accumulator and shall be capable of opening and closing all preventers and the choke line valve.

I. **Well control equipment testing** will be performed using clear water when the equipment is initially installed, whenever any seal subject to test pressure is broken, following related repairs, and as a minimum, every 30-day interval. The tests will apply to all related well control equipment.

Ram type preventers and associated equipment will be isolated and tested to 5000 psi. The annular preventer will be tested to 2500 psi. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer, for all tests. A casing head valve will be open below the test plug during testing of the BOP stack. Valves will be tested from the working pressure side with all down-stream valves open. Kill line valves will be tested with the check valve held open or the ball removed.

Pipe and blind rams will be activated each trip, but not more than once a day. The annular preventers will be functionally operated at least weekly. A pit level drill will be conducted weekly for each crew. All BOPE drills and tests will be recorded in the IADC driller's log.

III. Casing and Cementing:

A. Casing Program (all new casing):

Hole Size	Casing Size	Weight	Grade	Connection	Coupling Diameter	Setting Depth
30"	24"		Conductor			80' GL
12.25"	9.625"	36.0	J55	STC	10.625"	2025' kb
8.750"	7.000"	26.0	N-80 & HCL-80	LTC	7.656"	7000'kb

Casing O. D. (in)	9.625	7.0
Casing Grade	J-55	N-80 & HCL-80
Weight of Pipe (lbs/ft)	36.0	26.0
Connection	STC	LTC
Top Setting Depth - MD (ft)	0	0
Top Setting Depth - TVD (ft)	0	0
Bottom Setting Depth - MD (ft)	2025	7000
Bottom Setting Depth - TVD (ft)	2000	6790
Maximum Mud Weight - Inside (ppg)	9.2	8.4
Maximum Mud Weight - Outside (ppg)	9.2	10.5
Design Cement Top - MD (ft)	0	1500
Design Cement Top - TVD (ft)	0	1500
Max. Hydrostatic Inside w/ Dry Outside (psi)	957	2966
Casing Burst Rating (psi)	3520	7240
Burst Safety Factor (1.10 Minimum)	**3.68**	**2.44**
Max. Hydrostatic Outside w/ Dry Inside (psi)	957	3707
Collapse Rating	2020	5410
Collapse Safety Factor (1.125 Minimum)	**2.11**	**1.46**
Casing Weight in Air (kips)	72.9	182.0
Body Yield (kips)	564.0	604.0
Joint Strength (kips)	453.0	519.0
Tension Safety Factor (1.80 Minimum)	**6.21**	**2.85**

Casing with same or greater burst, collapse, and tension rating may be substituted for any of the planned casing sizes depending on availability and actual conditions.

B. Cementing Program

Casing Size	Cement Slurry	Quantity (sks)	Density (ppg)	Yield (ft^3/sk)
13.375"	Lead: Halliburton CBM Lite	220	11.0	3.548
	Tail: Class "G"	250	15.8	1.165
7.000"	Stage 1: 50/50 Poz	160	14.4	1.267
	Stage 2 Lead: CBM Lite	90	11.0	3.548
	Stage 2 Tail: Class 'G'	450	15.8	1.247

Surface: 9-5/8" surface casing will be cemented from setting depth (2025' MD) to surface and topped out with premium cement if necessary. Hardware will include a guide shoe, float collar, top plug, and a minimum of one centralizer per joint on the bottom three (3) casing joints. Water or other preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Intermediate: none

Production: 7" production casing will be cemented in two stages from setting depth (7000') to 1500' (at least 500' into the 9-5/8" casing). A minimum of 20 percent silica will be added to the cement slurry if bottom-hole temperature exceeds 230 °F. Slurry volume will be based on calipered hole size plus 20% excess. Hardware will include a guide shoe, float collar, top plug, stage tool, opening plug, closing plug, and centralizers as needed across any pay zones and salt sections. Water and preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Other: - The BLM and UDOGM will be notified at least twenty-four hours prior to running and cementing the surface and production casing strings.

- Actual cement slurries for all casing will be based on final service company recommendations.

- The size, weight, grade, type of thread, number of joints, and footage of all casing run will be recorded in the driller's log. The amount and type of all cement pumped will be recorded in the driller's log.

- Adequate time will be allowed before drilling out for the cement at the casing shoe to achieve a minimum 500-psi compressive strength.

- All casing strings will be tested to 1500 psi before drilling out and if pressure declines by more than 10 percent in 30 minutes, corrective action will be taken.

- Before drilling more than 20 feet of new hole below each casing string, a pressure integrity test of the casing shoe will be performed to a minimum of the mud weight equivalent anticipated to control the pore pressure to the next casing depth or at total depth of the well.

IV. Mud Program:

Depth	Mud Weight (ppg)	Mud Type	Viscosity	Fluid Loss
0 – 2025'	8.4 – 9.2	Fresh Water	26 – 50	N/C to 12 cc
2025' – 7000'	9.2 – 10.5	Salt Mud	36 – 50	N/C to 8 cc

A. After mudding up, slow pump rates will be taken daily and recorded in the driller's log.

B. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume.

C. Abnormal pressures are not anticipated. In the event such pressures are to be anticipated, electronic/mechanical mud monitoring equipment will be in place and include as a minimum; pit volume totalizer (PVT); stroke counter; and flow sensor.

D. A mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

E. The 10M BOPE system is not required for conditions on this well and use of the trip tank is not anticipated.

F. Gas detecting equipment will be installed in the mud return system, and hydrocarbon gas shall be monitored for pore pressure changes. The presence of Hydrogen Sulfide gas is not expected.

G. The need to vent combustible or noncombustible gas is not expected. If needed, a flare system designed to gather and burn all gas will be available. The flare line discharge will be located more than 100 feet from the well head and it will be positioned downwind of the prevailing wind direction. The flare line will have straight lines unless turns are targeted with running tees and it will be anchored. The flare system will have an effective method for ignition.

H. Abnormal pressure is not expected. If abnormal pressure is to be anticipated, a mud-gas separator (gas buster) will be installed and operable beginning at a point at least 500 feet above any anticipated hydrocarbon zone of interest.

V. Evaluation:

A. Mud Log: A mud logging unit will be in operation from a depth of approximately 2025 feet to TD. Samples will be caught, cleaned, bagged, and marked as required.

B. Drill Stem Tests: There is no DST planned.

C. Coring: There are no cores planned.

D. Wireline Logs: Wireline logs will be run as hole conditions allow from total depth to surface casing to assist in determining lithology and potential for hydrocarbon recovery. The logging tools will at a minimum survey resistivity, gamma radiation, and sonic velocity.

VI. Expected Bottom-Hole Pressure and Abnormal Conditions:

A. Hydrogen Sulfide: Hydrogen Sulfide (H_2S) gas is not expected in the geologic formations to be penetrated by this well.

B. Pressure: No abnormally pressured zones are expected in this well. The pressure gradient for all potentially productive formations is expected to be approximately 0.46 psi/ft.

C. Temperature: Bottom-hole temperature at TD is expected to be approximately 190 °F.

end

WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC

Energy Exploration in Partnership with the Environment

January 6, 2008

Diana Mason
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Wolverine State 17-10
API No. 43-041-30054
193' FNL, 2136' FWL, (NE/4 NW/4),
Section 20, T. 23 South, R. 1 West, SLB&M,
Sevier County, Utah

Dear Ms. Mason:

Enclosed are two copies of a corrected Sundry Notice to replace the referenced notice that was previously submitted with erroneous lease and well name information. Also attached are two copies of an attachment to replace the same titled attachment submitted with the original Sundry Notice. The drilling plan, directional plan, and R649-3-11 exhibit submitted with the original Sundry Notice are not being replaced.

Thank you for your assistance in this matter and I apologize for the inconvenience caused by the mistake. Please accept this letter as Wolverine's written request for confidential treatment of all information relating to this application and the proposed well.

Sincerely,

Ellis M. Peterson – Senior Production Engineer
Wolverine Operating Company of Utah, LLC

One Riverfront Plaza • 55 Campau, N.W. • Grand Rapids, MI 49503-2616 • 616.458.1150 • FAX 616.458.0869

CONFIDENTIAL

EXACT Engineering, Inc.
20 East Fifth St., Suite 310, Tulsa, OK 74103
www.exactengineering.com
(918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

January 19, 2009

CONFIDENTIAL

Mr. Al McKee
Bureau of Land Management
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Drilling Update #2 final - **Wolverine State 17-10 (Covenant Field)**
Sec 20 T23S R01W, Sevier Co, UT API# 43-041-30054

Gentlemen,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please note the following drilling activity for the subject well from Jan 5 to Jan 16, 2009. The report dates shown are for the 24-hr day (midnight to midnight).

Jan 5, 2009
Drill 3186' to 4082'; MW 10.5, VIS 39, FL 18.0; Svy 3947' incl 17.96 Az 42.26

Jan 6, 2009
Drill 4082' to 4176'; bit trip; drill 4176' to 4600'; MW 10.5, VIS 40, FL 21.0; Svy 4509' incl 17.44 Az 39.34

Jan 7, 2009
Drill 4600' to 5176'; MW 10.5, VIS 41, FL 24.0; Svy 5070' incl 17.81 Az 48.78

Jan 8, 2009
Drill 5176' to 5862'; MW 10.5, VIS 42, FL 16.0; Svy 5819' incl 13.92 Az 48.79

Jan 9, 2009
Drill 5862' to 6337'; MW 10.4, VIS 42, FL 5.0; Svy 6287' incl 0.33 Az 279.87

Jan 10, 2009
Drill 6337' to 6484'; bit trip; drill 6484' to 6589'; MW 10.4, VIS 43, FL 5.0; Svy 6463' incl 0.09 Az 44.85

Jan 11, 2009
Drill 6589' to 6913'; MW 10.4, VIS 45, FL 5.0; Svy 6837' incl 0.09 Az 44.85

Jan 12, 2009
Drill 6913' to 6950' TD; CC for logs, TOOH; MW 10.4, VIS 42, FL 5.0; Svy 6924' incl 0.18 Az 44.85

Jan 13, 2009
Logging, TIH

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Jan 14, 2009
TIH, CC, LDDP, run 179jts 7" 26ppf HCL80 & N80 new casing to 6949' with stage tool at 6290', circ and cond

Jan 15, 2009
Cement stage 1 with 100 sx 50:50 POZ (14.4ppg,1.27cfps,5.48gps), displace with 25 BW & 235 bbls mud, OK Open stage tool, circ 9 hrs; Cement stage 2 with 100 sx Varicem (11ppg,3.53cfps,22.4gps) tailed with 400 sx Class G Premium (15.8ppg,1.25cfps,5.31gps), good circ, JC 2:30am, WOC

Jan 16 2009
WOC, set slips, cut off csg, RR 18:00 1/16/2008; NOTE: ALL WELLS COMPLETED THIS PAD, RDMORT

We respectfully request that the enclosed information remain confidential.

Sincerely,

Steven R. Hash, P.E.
Petroleum Engineering Consultant

Copies: via email to:

SITLA	Lavonne Garrison
Wolverine Gas & Oil Co of Utah, LLC	Edward Higuera, Helene Bardolph
EXACT Engineering, Inc.	well file

CONFIDENTIAL

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML-46605

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: Wolverine State 17-10

2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC

9. API NUMBER: 4304130054

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616

PHONE NUMBER: (616) 458-1150

10. FIELD AND POOL, OR WILDCAT: Covenant Field, Navajo

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 193' FNL, 2136' FWL

COUNTY: Sevier

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Status Report
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUED CONFIDENTIAL STATUS REQUESTED

The Wolverine State 17-10 is one of five wells that was drilled from a single drilling pad. After drilling to a total depth of 6950' on 1/12/09 and running logs, 7" casing was run and cemented in place at TD. The drilling rig was released but has not been moved entirely from the location. Operations on Wolverine State 17-10 remain suspended until a completion rig can be moved in and the Wolverine Federal 20-4 has been completed.

NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer

SIGNATURE Ellis M. Peterson DATE 1/28/2009

(This space for State use only)

RECEIVED
FEB 04 2009
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML-46605

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: Wolverine State 17-10

2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC

9. API NUMBER: 4304130054

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616

PHONE NUMBER: (616) 458-1150

10. FIELD AND POOL, OR WILDCAT: Covenant Field, Navajo

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 193' FNL, 2136' FWL

COUNTY: Sevier

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Status Report
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUED CONFIDENTIAL STATUS REQUESTED

The Wolverine State 17-10 is one of five wells that was drilled from a single drilling pad. After drilling to a total depth of 6950' on 1/12/09 and running logs, 7" casing was run and cemented in place at TD. The drilling rig was released but has not been moved entirely from the location. Operations on Wolverine State 17-10 remain suspended until a completion rig can be moved in and the Wolverine Federal 20-4 has been completed.

NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer

SIGNATURE DATE 2/27/2009

(This space for State use only)

RECEIVED
MAR 05 2009
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

FORM 9

5. LEASE DESIGNATION AND SERIAL NUMBER: ML-46605

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: Wolverine State 17-10

2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC

9. API NUMBER: 4304130054

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616

PHONE NUMBER: (616) 458-1150

10. FIELD AND POOL, OR WILDCAT: Covenant Field, Navajo

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 193' FNL, 2136' FWL

COUNTY: Sevier

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Status Report
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CONTINUED CONFIDENTIAL STATUS REQUESTED

The Wolverine State 17-10 is one of five wells that was drilled from a single drilling pad. Drilling operations were completed on 1/17/2009. A completion rig was moved to well on 3/3/2009. The stage tool was drilled out and a CBL was run. An interval at 6695' - 6697' was perforated and swab tested. Squeeze holes were shot at 6720' - 6721' and a CICR was set at 6716'. Perforations were circulation squeezed using 25 sacks of Premium G cement and cement was drilled out to the CICR and new PBTD of 6716'. Navajo intervals at 6668' - 6673' and 6677' - 6683' were perforated with 6 spf. After swab testing, a RBP was set at 6662' and the Navajo was perforated at 6636' - 6646' with 6 spf and swab tested. The RBP was pulled, a CIBP was set at 6665', and one sack of cement was dump bailed on top of the CIBP. Production equipment was run and the well was turned to production on 3/20/2009.

NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer

SIGNATURE Ellis M. Peterson DATE 3/27/2009

(This space for State use only)

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED
OM B No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

5. Lease Serial No.
UTU-73528 (UT ML-46605)

6. If Indian, Allottee or Tribe Name
NA

7. If Unit or CA/Agreement, Name and/or No.
Wolverine Federal Unit

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Wolverine State 17-10

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

9. API Well No.
43-041-30054

3a. Address
55 Campau NW, Grand Rapids, Michigan 49503-2616

3b. Phone No. *(include area code)*
616-458-1150

10. Field and Pool, or Exploratory Area
Covenant Field Navajo

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
143' FNL, 2112' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&M

11. County or Parish, State
Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other **Correct Well Location**
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

This well was resurveyed subsequent to drilling and the surface location was found to vary from that originally permitted.

The permitted and actual as-drilled surface locations for the Wolverine State 17-10 are as follows:

Permitted Surface Location: 193' FNL, 2136' FWL, NE/4 NW/4, Section 20, T23S, R1W, SLB&M

Actual Surface Location: 143' FNL, 2112' FWL, NE/4 NW/4, Section 20, T23S, R1W, SLB&M

A new survey plat for the well is included herewith.

418964X 38.794874
4294220Y -111.933119

COPY SENT TO OPERATOR
Date: 5.13.2009
Initials: KS

RECEIVED
MAY 05 2009
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Ellis Peterson

Title **Sr. Production Engineer**

Signature

Date **04/29/2009**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title BRADLEY G. HILL ENVIRONMENTAL MANAGER

Date 05-11-09

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

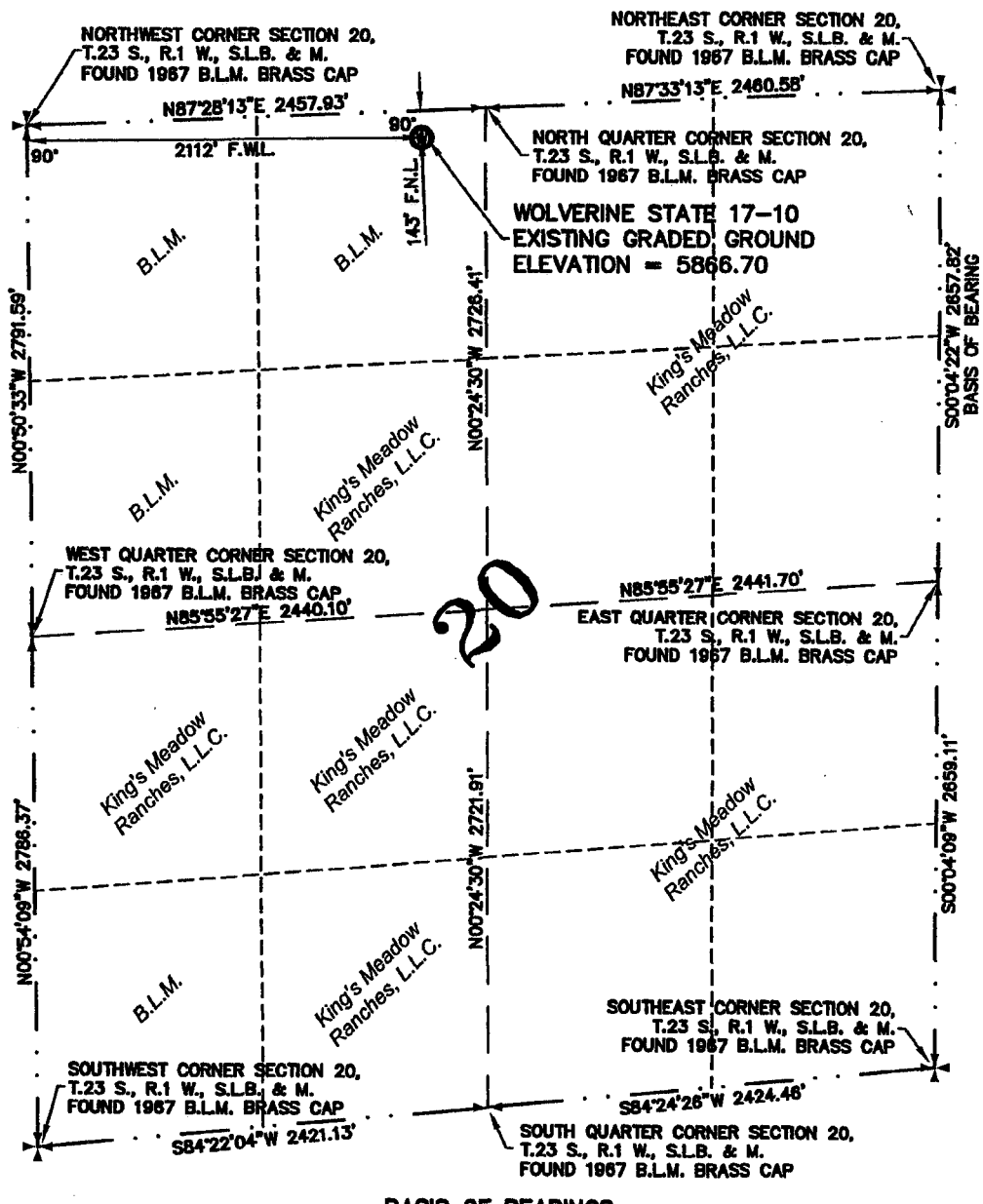
Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

COPY

Section 20, T.23 S., R.1 W., S.L.B. & M.



BASIS OF BEARINGS

BASIS OF BEARING USED WAS S00°04'22"W BETWEEN THE NORTHEAST CORNER AND THE EAST QUARTER CORNER OF SECTION 20, T.23 S., R.1 W., S.L.B. & M.
WELL COORDINATES: LATITUDE: 38°47'41.4845" (38.79485681) NAD 83 – UTM ZONE 12N NAD27 N-14088625.693
LONGITUDE: -111°56'02.3164" (-111.93397678) NAD 83 – UTM ZONE 12N NAD27 E-1374522.260

PROJECT

Wolverine Gas & Oil Company of Utah, L.L.C.

WELL LOCATION, LOCATED AS SHOWN IN THE N.E. 1/4 OF THE N.W. 1/4 OF SECTION 20, T.23 S., R.1 W., S.L.B. & M. SEVIER COUNTY, UTAH

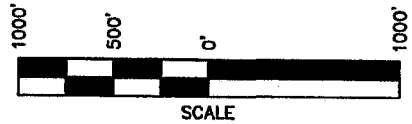
LEGEND

- = SECTION CORNERS (LOCATED)
- = QUARTER SECTION CORNERS (LOCATED)
- = EXISTING WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE WOLVERINE STATE 17-10 WELL LOCATION. LOCATED IN THE N.E. 1/4 OF THE N.W. 1/4 OF SECTION 20, T.23 S., R.1 W., S.L.B. & M., SEVIER COUNTY, UTAH.

BASIS OF ELEVATION

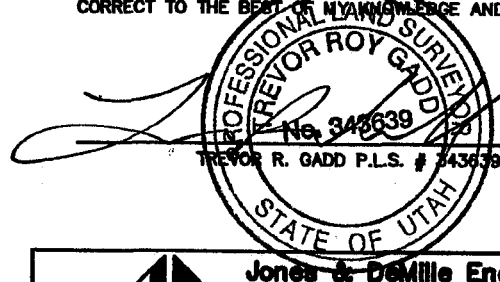
ELEVATION BASED ON THE U.S.G.S. BENCH MARK T-30 LOCATED IN THE S.W. 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.



SCALE

CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



04/07/09

TREVOR R. GADD P.L.S. # 343639

Jones & DeMille Engineering
1535 South 100 West – Richfield, Utah 84701
Phone (435) 896-8266
Fax (435) 896-8268
www.jonesanddemille.com

Well Location Plat for

Wolverine Gas & Oil Company of Utah, L.L.C.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
–	K.D.B.	T.R.G.	T.W.G.	0703-201	1
DATE		DWG.NAME	SCALE		
04/07/09		WELL_LOC	1"=1000'		

WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC

Energy Exploration in Partnership with the Environment

April 29, 2009

Mr. Stan Andersen
Fluid Minerals Group
Bureau of Land Management
Richfield Field Office
150 East 900 North
Richfield, Utah 84701

Re: Sundry Notices - Wolverine Gas and Oil Company of Utah, LLC
Wolverine Federal 19-2
Wolverine Federal 20-2
Wolverine Federal 20-4
Wolverine State 17-10
Wolverine State 20-3

Dear Mr. Andersen:

Wolverine Gas and Oil Company of Utah, LLC respectfully submits the enclosed Sundry Notices (Form 3160-5) for the subject wells.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information relating to these wells.

RECEIVED
MAY 05 2009
DIV. OF OIL, GAS & MINING

Sincerely,

Ellis M. Peterson
Senior Production Engineer
Wolverine Gas and Oil

Cc w/ attachments: Gil Hunt, UDOGM

One Riverfront Plaza • 55 Campau, N.W. • Grand Rapids, MI 49503-2616 • 616.458.1150 • FAX 616.458.0869

CONFIDENTIAL

Form 3160-4
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. **UTU-73528 (UT ML-46605)**

1a. Type of Well ☑ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion: ☑ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr,.
Other

6. If Indian, Allottee or Tribe Name **N.A.**

7. Unit or CA Agreement Name and No. **Wolverine Federal Unit**

2. Name of Operator **Wolverine Gas and Oil Co. of Utah, LLC**

8. Lease Name and Well No. **Wolverine State 17-10**

3. Address **55 Campau NW, Grand Rapids, MI 49503**

3a. Phone No. *(include area code)* **616-458-1150**

9. AFI Well No. **4304130054**

4. Location of Well *(Report location clearly and in accordance with Federal requirements)**

At surface **143' FNL, 2112' FWL, Sec. 20, T23S, R1W**

At top prod. interval reported below **799' FSL, 1830' FEL, Sec. 17, T23S, R1W**

At total depth 893' FSL, 1831' FEL, Sec. 17, T23S, R1W per HSM review

10. Field and Pool, or Exploratory **Covenant Field, Navajo**

11. Sec., T., R., M., on Block and Survey or Area **20, T23S, R1W, NENW, SLB&M**

12. County or Parish **Sevier** 13. State **UT**

14. Date Spudded **12/30/2008**

15. Date T.D. Reached **01/12/2009**

16. Date Completed **03/30/2009** ☐ D & A ☑ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)* **5892' KB, 5866' GL**

18. Total Depth: MD **6950'** TVD **6745'**

19. Plug Back T.D.: MD **6866'** TVD **6661'**

20. Depth Bridge Plug Set: MD **6660** TVD **6455**

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
DLL/MSFL/GR, SDL/DSN/GR, XRMI, FWS, CBL

22. Was well cored? ☑ No ☐ Yes (Submit analysis)
Was DST run? ☑ No ☐ Yes (Submit report)
Directional Survey? ☐ No ☑ Yes (Submit copy)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
30.0"	**20"**	**0.25 wall**	**Surface**	**126**		**Prem**	**31**	**Surface**	
12.25"	**9.625 J**	**36.0**	**Surface**	**1990**		**355 VariCem**	**220**	**Surf. (CIRC)**	
"	"	"				**350 Prem G**	**73**		
8.75"	**7" N80**	**26.0**	**Surface**	**6949**	**6284**	**100 50:50 poz**	**23**		
"	"	"				**100 VariCem**	**63**	**2775 (CBL)**	
"	"	"				**400 Prem G**	**89**		

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 7/8	**6262**							

25. Producing Intervals / 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) **Navajo**	**6636**	**6646**	**6636-6646**	**0.40"**	**60**	**Open - Producing**
B)			**6668-6673, 6677-6683**	**0.40"**	**66**	**TA below CIBP**
C)			**6720-6721, 6695-6697**	**0.40"**	**12**	**Cement squeezed**
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
6695-6721	**Circulated 25 sacks of cement through CICR at 6716' and squeezed both sets of holes**

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28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/20/2009	**03/30/2009**	**24**	→	**354**	**Tr**	**661**	**40**		**ESP**

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
			→	**354**	**Tr**	**661**		**Producing Oil Well**

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
			→					

**(See instructions and spaces for additional data on page 2)*

CONFIDENTIAL

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*

Vented

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Navajo 1	**6360**		**Oil and Water**	**Arapien** **Twin Creek 1** **Navajo 1**	**Surface** **6202** **6360**

32. Additional remarks (include plugging procedure):

33. Indicate which itmes have been attached by placing a check in the appropriate boxes:

☑ Electrical/Mechanical Logs (1 full set req'd.) ☑ Geologic Report ☐ DST Report ☑ Directional Survey
☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name *(please print)* **Ellis Peterson** Title **Sr. Production Engineer**

Signature **Ellis Peterson** Date **05/06/2009**

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Actual Wellpath Report

Wolverine State 17-10 _awp

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine State 17-10 143'FNL & 2112'FWL**
Area	**UTAH**	Well	**Wolverine State 17-10**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine State 17-10**
Facility	**SEC.20-T23S-R1W**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / Lambert Utah State Planes, Central Zone (4302), feet**	Software System	**WellArchitect® 2.0**
North Reference	**True**	User	**Buscnat**
Scale	**1.00006**	Report Generated	**4/29/2009** at **3:38:50 PM**
Convergence at slot	**0.28° West**	Database/Source file	**WellArchitect_Denver/Wolverine_State_17-10_.xm**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[ft]**	**Northing[ft]**	**Latitude**	**Longitude**
Slot Location	0.00	0.00	1516717.99	6730089.62	**38°47'41.484"N**	**111°56'02.316"W**
Facility Reference Pt			1516717.99	6730089.62	**38°47'41.484"N**	**111°56'02.316"W**
Field Reference Pt			1516137.40	6732230.79	**38°48'02.619"N**	**111°56'09.781"W**

WELLPATH DATUM			
Calculation method	**Minimum curvature**	SST 58 (RT) to Facility Vertical Datum	**5892.70ft**
Horizontal Reference Pt	**Slot**	SST 58 (RT) to Mean Sea Level	**5892.70ft**
Vertical Reference Pt	**SST 58 (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**SST 58 (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**44.85°**

Actual Wellpath Report

Wolverine State 17-10 _awp

INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 143'FNL & 2112'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0.00†	0.000	147.900	0.00	0.00	0.00	0.00	0.00
26.00	0.000	147.900	26.00	0.00	0.00	0.00	0.00
154.00	0.180	147.900	154.00	-0.05	-0.17	0.11	0.14
247.00	0.260	144.740	247.00	-0.11	-0.47	0.31	0.09
339.00	0.440	167.940	339.00	-0.34	-0.98	0.50	0.25
431.00	0.620	182.360	430.99	-0.90	-1.83	0.55	0.24
523.00	0.880	166.540	522.99	-1.64	-3.01	0.70	0.36
614.00	0.790	158.450	613.98	-2.26	-4.27	1.09	0.16
706.00	0.790	151.770	705.97	-2.70	-5.42	1.62	0.10
797.00	0.620	156.340	796.96	-3.06	-6.42	2.12	0.20
890.00	1.320	95.170	889.95	-2.56	-6.98	3.39	1.24
984.00	2.640	88.140	983.89	-0.29	-7.01	6.63	1.43
1079.00	4.130	73.720	1078.72	4.30	-5.98	12.10	1.79
1173.00	6.060	52.280	1172.36	12.18	-1.99	19.28	2.85
1266.00	6.940	42.430	1264.76	22.66	5.16	26.95	1.52
1360.00	7.820	38.220	1357.98	34.69	14.37	34.74	1.10
1454.00	9.050	37.510	1450.96	48.37	25.26	43.20	1.31
1547.00	10.810	42.790	1542.57	64.35	37.46	53.58	2.13
1641.00	13.100	46.650	1634.52	83.81	51.25	67.31	2.58
1735.00	14.770	47.360	1725.75	106.43	66.68	83.87	1.79
1828.00	16.440	45.250	1815.32	131.43	83.97	101.94	1.90
2074.00	17.310	38.900	2050.75	202.65	136.97	149.65	0.83
2167.00	17.840	40.310	2139.41	230.61	158.60	167.55	0.73
2261.00	17.860	36.160	2228.89	259.21	181.22	185.38	1.35
2355.00	17.900	31.530	2318.35	287.52	205.17	201.44	1.51
2448.00	17.910	28.310	2406.85	315.14	229.94	215.69	1.06
2542.00	17.840	36.790	2496.33	343.25	254.20	231.17	2.77
2635.00	17.930	43.470	2584.84	371.67	276.00	249.55	2.21
2729.00	17.700	41.040	2674.34	400.40	297.28	268.89	0.83
2823.00	17.540	38.620	2763.93	428.73	319.13	287.11	0.80

Actual Wellpath Report

Wolverine State 17-10 _awp

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 143'FNL & 2112'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (74 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
2916.00	17.800	49.000	2852.56	456.85	339.41	306.59	3.40
3010.00	17.860	53.170	2942.05	485.44	357.47	328.98	1.36
3104.00	17.460	44.550	3031.64	513.81	376.17	350.41	2.81
3197.00	17.980	43.880	3120.22	542.12	396.46	370.15	0.60
3291.00	17.670	47.960	3209.72	570.87	416.47	390.80	1.37
3384.00	17.940	49.860	3298.26	599.23	435.15	412.23	0.69
3478.00	18.020	52.960	3387.67	628.05	453.25	434.91	1.02
3572.00	17.840	55.180	3477.11	656.61	470.23	458.33	0.75
3666.00	18.020	48.040	3566.55	685.30	488.17	480.97	2.34
3759.00	18.110	37.840	3654.99	714.01	509.21	500.54	3.40
3853.00	18.220	40.660	3744.31	743.17	531.89	519.07	0.94
3947.00	17.960	42.260	3833.66	772.30	553.77	538.40	0.60
4040.00	17.780	51.110	3922.19	800.75	573.30	559.09	2.92
4134.00	17.930	56.130	4011.67	829.20	590.37	582.28	1.64
4228.00	18.110	55.070	4101.06	857.77	606.80	606.27	0.40
4321.00	17.360	47.730	4189.65	885.86	624.41	628.39	2.53
4415.00	17.780	42.950	4279.27	914.21	644.35	648.55	1.60
4509.00	17.440	39.340	4368.87	942.58	665.75	667.26	1.22
4602.00	17.580	38.410	4457.56	970.40	687.54	684.82	0.34
4696.00	17.720	39.020	4547.13	998.74	709.77	702.65	0.25
4789.00	17.580	42.190	4635.76	1026.85	731.18	720.99	1.04
4883.00	17.330	43.550	4725.43	1055.03	751.84	740.17	0.51
4977.00	17.580	42.430	4815.10	1083.21	772.47	759.39	0.45
5070.00	17.810	48.780	4903.71	1111.43	792.21	779.57	2.09
5164.00	17.650	49.350	4993.25	1139.98	810.96	801.19	0.25
5257.00	17.570	47.200	5081.89	1168.06	829.68	822.19	0.70
5351.00	17.850	42.700	5171.44	1196.63	849.91	842.37	1.49
5445.00	17.960	41.790	5260.89	1225.50	871.31	861.80	0.32
5538.00	17.710	48.220	5349.42	1253.94	891.42	881.90	2.13
5632.00	17.560	51.200	5439.01	1282.31	909.84	903.62	0.97

Actual Wellpath Report

Wolverine State 17-10 _awp

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine State 17-10 143'FNL & 2112'FWL
Area	UTAH	Well	Wolverine State 17-10
Field	SEVIER COUNTY	Wellbore	Wolverine State 17-10
Facility	SEC.20-T23S-R1W		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
5726.00	15.590	48.720	5529.10	1309.01	927.06	924.16	2.23
5819.00	13.920	48.790	5619.03	1332.64	942.67	941.97	1.80
5912.00	12.440	47.930	5709.58	1353.80	956.75	957.82	1.61
6006.00	8.950	46.420	5801.93	1371.23	968.58	970.64	3.72
6099.00	5.970	39.800	5894.13	1383.28	977.29	978.98	3.33
6193.00	3.130	37.840	5987.83	1390.70	983.07	983.68	3.03
6287.00	0.330	279.870	6081.78	1393.09	985.14	984.99	3.51
6380.00	0.110	342.970	6174.78	1392.98	985.28	984.70	0.32
6463.00	0.090	44.850	6257.78	1393.08	985.40	984.72	0.13
6556.00	0.200	44.850	6350.78	1393.32	985.56	984.89	0.12
6650.00	0.260	44.850	6444.78	1393.69	985.83	985.15	0.06
6744.00	0.000	44.850	6538.78	1393.91	985.98	985.31	0.28
6837.00	0.090	44.850	6631.78	1393.98	986.03	985.36	0.10
6924.00†	0.180	44.850	6718.78	1394.19	986.18	985.50	0.10

HOLE & CASING SECTIONS Ref Wellbore: Wolverine State 17-10 Ref Wellpath: Wolverine State 17-10 _awp

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	0.00	146.00	146.00	0.00	146.00	0.00	0.00	-0.15	0.0
9.625in Casing Surface	26.00	1990.00	1964.00	26.00	1970.48	0.00	0.00	117.98	133.7

Actual Wellpath Report

Wolverine State 17-10 _awp

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine State 17-10 143'FNL & 2112'FWL**
Area	**UTAH**	Well	**Wolverine State 17-10**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine State 17-10**
Facility	**SEC.20-T23S-R1W**		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Shape
Wolverine State 17-10 Target 823'FSL & 1772'FEL Section 17		6291.00	955.76	1026.55	1517749.24	6731040.45	38°47'50.931"N	111°55'49.350"W	point

WELLPATH COMPOSITION **Ref Wellbore: Wolverine State 17-10** **Ref Wellpath: Wolverine State 17-10 _awp**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1828.00	MTC (Collar, post-2000) (Standard)	12-1/4" Hole sz BHI MWD 154-1828	Wolverine State 17-10
1828.00	6837.00	MTC (Collar, post-2000) (Standard)	8-3/4" Hole sz BHI MWD 2074-6837	Wolverine State 17-10
6837.00	6924.00	Blind Drilling (std)	Projection to bit	Wolverine State 17-10

WOLVERINE GAS & OIL COMPANY

Location:	UTAH	Slot:	Wolverine State 17-10 143'FNL & 2112'FWL
Field:	SEVIER COUNTY	Well:	Wolverine State 17-10
Facility:	SEC.20-T23S-R1W	Wellbore:	Wolverine State 17-10 PWB

BAKER HUGHES INTEQ

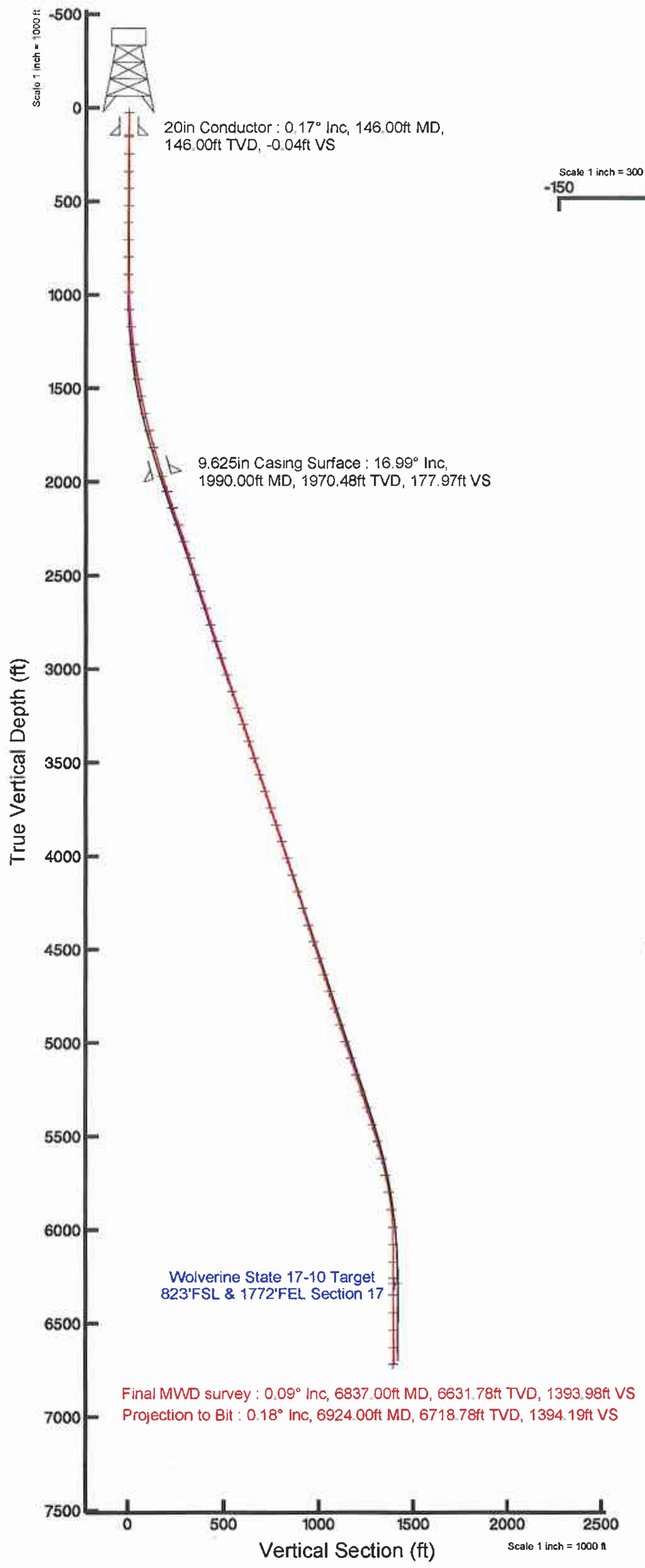
Plot reference wellpath is Wolverine State 17-10 PWP Rev B.0	
Measured depths are referenced to Rig on Wolverine State 17-10 SST 58	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), feet
True Vertical depths are referenced to Rig on Wolverine State 17-10 SST 58	North Reference: True north
Rig on Wolverine State 17-10 193'FNL & 2136'FWL (ST) to Mean Sea Level: 5822.7 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: SEC 20-T23S-R1W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: busenat on 4/28/2009

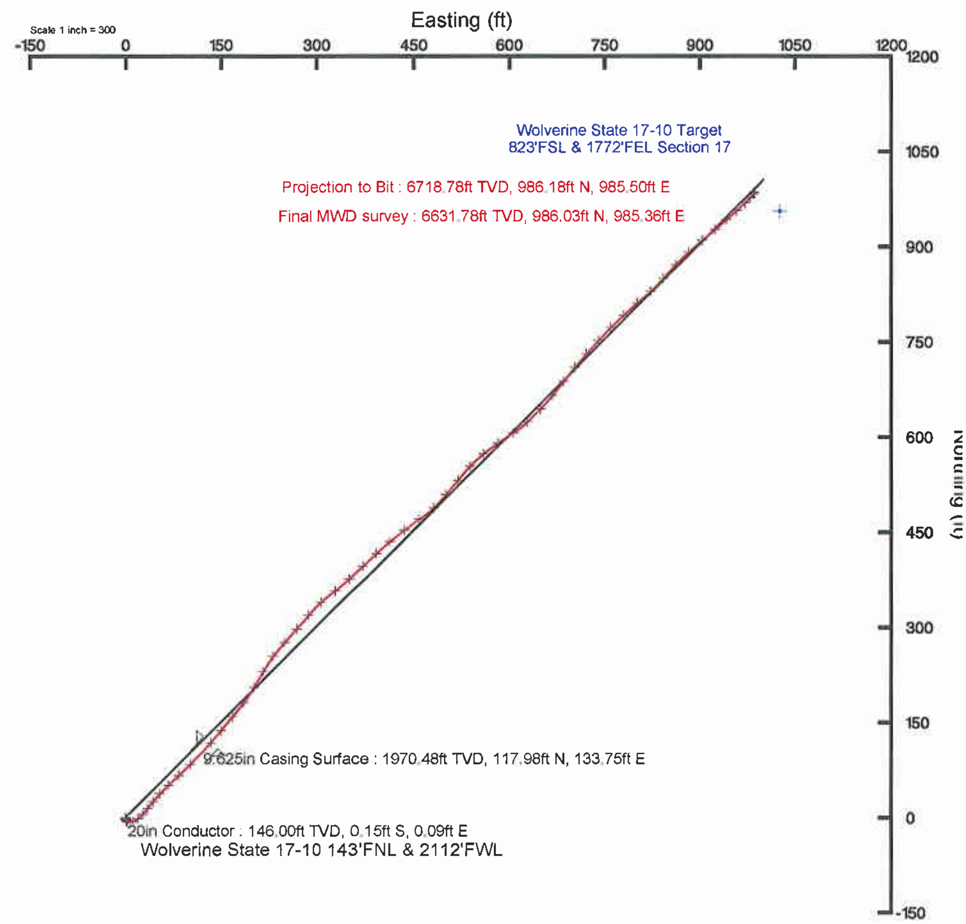
Well Profile Data

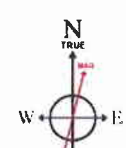
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	44.854	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	44.854	1000.00	0.00	0.00	0.00	0.00
Build (S)	1900.00	18.000	44.854	1885.27	99.40	98.89	2.00	140.21
End of Tangent (S)	5584.50	18.000	44.854	5389.44	906.53	901.94	0.00	1278.79
Drop (S)	6484.50	0.000	44.854	6274.71	1005.93	1000.83	2.00	1419.00
End of Tangent	6909.80	0.000	44.854	6700.00	1005.93	1000.83	0.00	1419.00

Location Information

Facility Name			Grid East (ft)	Grid North (ft)	Latitude	Longitude
SEC.20-T23S-R1W			1516743.473	6730039.327	38°47'40.989"N	111°56'01.882"W
Slot	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine State 17-10 143'FNL & 2112'FWL	50.17	-25.72	1516717.982	6730089.534	38°47'41.484"N	111°56'02.316"W
Rig on Wolverine State 17-10 SST 58					5892.7ft	
Mean Sea Level to Mud line (Facility: SEC 20-T23S-R1W)					0ft	
Rig on Wolverine State 17-10 SST 58					5892.7ft	







BGGM (1945.0 to 2010.0) Dip: 64.47° Field: 51577.4 nT
Magnetic North is 12.18 degrees East of True North (at 12/29/2008)

To correct azimuth from Magnetic to True add 12.18 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 12.18 = 102.18

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address
55 Campau NW, Grand Rapids, MI 49503

3b. Phone No. *(include area code)*
616-458-1150

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
143' FNL, 2112' FWL, NENW, Sec. 20, T23S, R1W

5. Lease Serial No.
UTU-73528

6. If Indian, Allottee or Tribe Name
NA

7. If Unit or CA/Agreement, Name and/or No.
Wolverine Unit

8. Well Name and No.
Wolverine State 17-10

9. API Well No.
4304130054

10. Field and Pool, or Exploratory Area
Covenant Field, Navajo

11. County or Parish, State
Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☑ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine Gas & Oil Company of Utah, LLC plans to undertake a workover on the Wolverine State 17-10 starting May 10, 2011. Water-cut in the lower Navajo has been increasing at a steady rate yielding low quantities of oil due to its low structural position and limited feet of pay. Given that this well was originally drilled to be an upper Navajo producer, the existing perforations will be abandoned and the well will be recompleted up hole in the upper Navajo. Remaining oil-in-place in the lower Navajo is anticipated to be recovered up dip from offset wells.

The recommended procedure for this well will entail setting a balanced cement plug and cement squeezing the existing perforations in the lower Navajo. Moving up hole to perforate and complete 3 separate intervals in the upper Navajo with then commence. Perforations will be broken down individually if necessary, and the well will be put on production.

COPY SENT TO OPERATOR
Date: 5.25.2011
Initials: KS

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 5/23/2011
BY: Dustin Doucet

Federal Approval Of This Action Is Necessary

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Matthew Rivers

Title **Production Engineer**

Signature

Date **05/09/2011**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

RECEIVED
MAY 16 2011
DIV. OF OIL, GAS & MINING

COPY CONFIDENTIAL

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	UTU-73528
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	NA
7. UNIT or CA AGREEMENT NAME:	Wolverine Federal Unit
1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER	8. WELL NAME and NUMBER: Wolverine State 17-10
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC	9. API NUMBER: 4304130054
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503 PHONE NUMBER: (616) 458-1150	10. FIELD AND POOL, OR WILDCAT: Covenant Field, Navajo
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 143'FNL, 2112' FWL	COUNTY: Sevier County
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S	STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☑ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
6/4/2011	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☑ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The Wolverine State 17-10 workover commenced on May 10, 2011 and the well was subsequently put back online June 6, 2011. A zone of casing collapse was identified during the initial attempt to pull the ESP as it became stuck in the hole. The production tubing was cut above the pump and pulled out of the hole. The pump was then jarred free and enventually fished out of the hole. Perforations in the lower Navajo were abandoned by setting a balanced plug and a 4-1/2" 10.6# P-110 liner was set from PBTD to 5168' MD to cover the damaged casing interval and cemented in place. Two perforation sets were added and individually broken down with 4500 gallons of 7-1/2 % FE HCL Acid and a new ESP and y-tool were run and set above the liner hanger. The well came back online initially producing 800 BO & 0 BW with a FBHP at the perfs of 2000 psi.

See attached Activity Report and WBD for additional details.

NAME (PLEASE PRINT) Matthew Rivers TITLE Production Engineeer

SIGNATURE  DATE 7/1/2011

(This space for State use only)

RECEIVED
JUL 12 2011
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

Covenant Field
WS 17-10 Section 20, T23S, R1W
API# 43-041-30054 Sevier County, Utah

5/10/2011 MIRUSU, hauled in frac tanks, rig pump and water filtration system. Hooked up flow back and pump lines, filled frac tanks with fresh water and KCL. Filtered water through 5 micron filters. Shut well in and dropped bar to break drain sub on the ESP, ND wellhead & NU BOP's. SWIFN

Plan to POOH with ESP.

5/11/2011 Opened well, RU cable spoolers, POOH with 53' of tubing and hung up down hole, free pointed tubing with the workover rig and estimated to be stuck at 6100', called in wireline unit for an accurate free point and it was determined that all of the tubing was free. After reviewing logs it appears that the ESP is stuck in collapsed casing at a salt section located from 5914' - 6195' - calculations show that the pump is located 28' into the bottom of this salt section. SWIFN

Plan to review options then cut the tubing and cable.

5/12/2011 Opened well, RU wireline unit and chemical cutter, RIH to 6083' and cut the tubing, POOH and RD wireline unit. Pick up on tubing slowly to part the ESP cable then POOH with tubing and cable. Recovered 6083' of tubing and all of the ESP power cable, the cable pulled out of the pot head on the motor. RIH with 1 stand then SWIFN.

Plan to RU tubing fish then TIH and jar pump free from collapsed area then cut the tubing off 2 joints above the pump and let the pump fall to bottom then RU and run a caliper log to determine the ID of the collapsed area of the casing.

5/13/2011 Opened well, POOH with 1 stand, PU & TIH with overshot, bumper sub, jar and 195 jts of tubing, tagged up on fish at 6083', picked up 10,000 lbs over string weight then jarred down twice and pump released. Picked up and rotated in attempt to work the pump through the tight area then POOH with tubing and fishing tools. Pump was released and fell to the plug at 6664'. RU wireline unit and run a casing inspection log from 6520' to 4400' with a 40 finger imaging tool. Casing damage was found as follows:

5422'-5426' Min ID 6.16"
5621'-5650' Min ID 6.19"
5633'-5684' Min ID 6.21"
5912'-5918' Min ID 5.72"
5954'-5968' Min ID 6.08"
6088'-6098' Min ID 6.13"
6128'-6140' Min ID 6.09"
6173'-6178' Min ID 6.15"
6190'-6192' Min ID 5.56"

See casing diagrams on 5-13-11 Damaged casing tab.

5/14/2011 Opened well, POOH with 1 stand, PU & TIH with overshot, bumper sub, jar and 209 jts tubing, tagged up on fish at 6535', RU RU swab equipment and RIH and knocked out the crows foot on the drain sub at 6582', POOH and laid down swab equipment. RU wireline unit, RIH with 1.75" chemical cutter and stacked out at the drain sub, attempted several times to travel through the drain sub with no success. POOH with wireline, RU swab equipment and made three runs through the drain sub with a 1.9" swab mandrel, POOH and RD swab equipment, RU & RIH with wireline cutter and passed through the drain sub to a depth of 6617', discharged cutter & POOH with wireline. Jarred down on pump twice in attempt to break the tubing at the cut, POOH with

tubing and hung up in the collapse area of 6190'-6192', pulled 20,000 over and pulled through without drag then hung up at 5912'-5918', pulled free at 18,000 over string weight, finished pulling out of hole and found that the tubing cut had failed and the downhole pump assembly was attached to the fish. Laid down BHA and fishing equipment, RIH with 1 stand, SWIFN.

Note: The cutter that was used was for 2 3/8" tubing, this was to allow clearance to pass through the 1.9" drain sub.

5/15/2011 Opened well, POOH with 1 stand, PU & TIH with 5.5" casing swage, x-over, 2 4 5/8" drill collars, 3 1/2" FH x 3 1/2" IF crossover sub, bumper sub, 3 1/2" IF x 3 1/2" FH x-over, 4 3/4" jar, 4-4 1/2" drill collars, intensifier, 2 7/8" x 3 1/2" IF x-over and 194 jts to a depth of 6307'. POOH laying down casing swaging equipment, TIH 212 jts of 2 7/8" tubing to PBTD at 6665', PU 2' and reverse circulated with 70 bbls of fresh water, SD and reversed pump lines and circulated 55 bbls of fresh water followed by 5 bbls cement then displaced with 37.8 bbls of fresh water, pulled up and removed 12' of subs then pulled end of tubing to 5900' and squeezed cmt into perf interval at 6636'-6646' with a max injection pressure of 1350 psi. TIH with tubing to 6616' and reverse circulated remaining cement out of hole. Pulled end of tubing up to 5900' and pressured up to 500 psi, SWIFN

Note: Squeezed approximately .4 bbls of cement into perf interval at 6636'-6646'. Pressure data from the cement squeeze will be available in two days.

Plan to run 7" casing scraper to 5900' then tag up on cement top to confirm PBTD depth and insure casing is open to run 4 1/2" liner.

5/16/2011 Opened well, POOH with 1 stand, PU & TIH with 7" 26# casing scraper to 5900' then POOH and laid down scraper. RU sand line & RIH with a 5 1/2" casing drift to PBTD @ 6220', POOH & SWIFN. Unload drill collars, pipe racks, 4 1/2" P110 casing and automatic cat walk & prepped location for casing liner installation.

Plan to install and cement in 4 1/2" casing liner from 6617' - 5172'

5/17/2011 Opened well, PU 4 1/2" double jet float shoe, 4 1/2" float collar, 4 1/2" PBL landing collar, 33 jts 4 1/2" 11.6# P110 casing, liner hanger, setting tool, 33 jts 4 3/4" drill collars, 3 1/2" IF x 2 7/8" EUE XO and 132 jts 2 7/8" tubing to surface. Set liner bottom at 6615', RU Halliburton cementing equipment, pressured up on liner to 2100 psi to set hanger, pumped 10 bbls of fresh water to establish circulation, rotate out of packer top, pumped 30.7 bbls of 15.8# 1.15 yield 4.92 Gal/SK class G cement followed by 51.3 bbls of fresh water, bumped plug and pressured up to 3200 psi, released pressure, changed over and pressure tested annuals to 500 psi, reversed out cement with 60 bbls of fresh water, approximately 4 bbls of cement on returns. Flushed out lines RD and released cementing equipment, pulled out of hole with 4 stands, SWIFN.

Note: Casing liner top is at 5168' KB WLM

Plan to finish pulling out of the hole with tubing and drill collars then wait on cement.

See 5-17-11 Casing liner tab for details

5/18/2011 Opened well, pulled out of hole with 2 7/8" tubing then laid down (33) 4 3/4" drill collars. Rigged down handling equipment, SWIFN. Waiting on cement.

Plan to Run 3 7/8" bit and 4 1/2" casing scraper to PBTD (6587'), swab down and perforate 6528'-6546'

5/19/2011 Opened well, trip in hole with 4 1/2" casing scraper, 49 jts of 2 3/8" tubing, XO & 165 jts of 2 7/8" tbg. Tagged PBTD @ 6587', RU pump lines & circulated 200 bbls of CF, RD pump lines and pulled out of hole with tubing & casing scraper laying down 2 3/8" tubing. Rig up wireline unit and perforated 6528'-6546' with the following:

Titan Part # EXP 3325-321T

25 gram charges

.42 entry hole

43.6" penetration

3 3/8" EXP gun loaded 6 spf on 60 deg phasing.

RD and release wireline unit. Picked up & RIH with removable bridge plug, retrieving head, two joints of 2 7/8" tubing, 4 1/2" HD packer & 204 joints of tubing to surface. Set RBP at 6560' released off plug then set packer at 6401' then pressure tested to 2000 psi. SWIFN

Plan to swab 6528'-6546' for rate and clean up.

5/20/2011 Opened well, 40 psi tubing 500 psi casing. RU swab equipment, made 7 runs recovering 23 bbls of water with no entry. See 5-20-11 swab report for details. SWIFN

Plan to pump acid on Monday 5/22/11

5/21/2011 No activity, waiting on acid equipment

5/22/2011 No activity, waiting on acid equipment

5/23/2011 Opened well, 45 psi tubing, 500 psi casing. RU acid equipment, and pumped as follows:

Time	Ave rate	Max rate	Bbls	Ave psi	Max psi	
13:11	2	2.1	11.90	260	620	Started in with 7 1/2% HLC acid
13:15	2	2.1	23.81	269	629	Pump acid with Balls
13:27					627	Shut down close bypass
13:31	1.6	3.9	11.90	3598	3942	Pump last acid stage
13:39	3.9	3.9	59.52	2798	2926	Displace acid
13:54					2760	Shut down
13:54					2163	ISIP
13:59					1668	5 min pressure
14:04					1322	10 min pressure
14:09					1064	15 Min pressure

Note: 7.5% HCL Acid was mixed with 2 gpt CI, 0.5 gpt NEA-96M surfactant and pumped with 4% KCL water. RD and released acid equipment, RU circulating equipment and reverse circulated with 50 bbls of 4% KCL, RD circulating equipment. RU swab equipment and made 8 swab runs recovering 57 bbls of water and 4 bbls of oil with a rate of 300 bpd with a fluid level at 6397'. See 5/23/11 Swab report for details. SWIFN

Plan to continue swabbing for rate and clean up.

5/24/2011 Opened well, 70 psi tubing, 0 psi casing. RU swab equipment, made 11 runs recovering 55 bbls oil, 19 bbls water with an average fluid level of 5000' at a rate of 215 bpd of total fluid. See 5-24-11 Swab report for details Released packer, latched onto RBP, RU pump lines and reverse circulated 45 bbls of 4% KCL water. RD pump lines, released RBP and reset at 6518', released off plug. RU swab equipment and swabbed fluid level down to 2500', RD swab equipment and SWIFN.

Plan to perforate 6493'-6516'

5/25/2011 Opened well, POOH with tubing and packer, RU wireline unit and perforated 6493'-6516' with the following:

Titan Part # EXP 3325-321T

25 gram charges

.42 entry hole

43.6" penetration

3 3/8" EXP gun loaded 6 spf on 60 deg phasing.

RD and released wireline unit, TIH with 2 joints of 2 7/8" tubing, 4 1/2" HD packer & 204 joints 2 7/8" tubing to surface. Set packer with 20,000 lbs compression, pressure tested packer to 2000 psi, bled pressure off to 500 psi, RU swab equipment, made 8 swab runs recovering 38 bbls of oil and 23 bbls of water with a rate

of 540 bopd, 0 bwpd with a fluid level of 5200'. RD swab equipment and left well open to a frac tank.

Rig crew going on days off

5/26/2011 Well flowed 40 bbls to frac tank

5/27/2011 Well flowed 35 bbls to frac tank

5/28/2011 Well flowed 45 bbls to frac tank

5/29/2011 Well flowed 40 bbls to frac tank

5/30/2011 Well flowed 40 bbls to frac tank

Plan to pump acid on perf interval 6493'-6516' on June 1st

5/31/2001 Well flowed 40 bbls to frac tank

6/1/2011 RU acid equipment, and pumped as follows:

Time	Ave rate	Max rate	Bbls	Ave psi	Max psi	
9:18	1.6		9.00	145		Started in with 7 1/2% HLC acid
9:27	2		28.00	278		Pump acid w/ 70 Perfpac balls
9:35	2		44.00	256		Shut down - Set packer
9:40			44.00	0		Pump acid w/ 50 Perfpac balls
9:43	1		47.00	3833	4590	Acid on perfs
9:47	5.1		57	2771		Pump acid
9:49	5.1		69	2610		Flush
10:01	5.1		128	2744		Shut down
10:01				1589		ISIP
10:06				342		5 minute
10:11				129		10 minute
10:16				29		15 minute

Note: 7.5% HCL Acid was mixed with 2 gpt CI, 0.5 gpt NEA-96M surfactant and pumped with 4% KCL water. RD and released acid equipment, RU circulating equipment and reverse circulated with 50 bbls of 4% KCL, RD circulating equipment. RU swab equipment and made 17 swab runs recovering 76 bbls of water and 69 bbls of oil with a rate of 1000 bopd with a fluid level at 1000' from surface.

See 6/1/11 Swab report for details. Opened well to frac tank for the night

Plan to continue swabbing for rate and clean up.

6/2/2011 Well flowed 600 bopd rate until 14:00 hrs.

Released packer, latched onto RBP, pulled out of hole with tubing, packer and plug.

Note: Well was not circulated, the well was allowed to balance out with the 4% KCL water in the annulas.

Plan to install pump tomorrow.

6/3/2011 Opened well, RU spooling equipment and vac truck. PU and RIH with 5.5" colapsable centralizer, Centinel, motor, seal section, pump, 2 3/8" x 8' tubing sub, Y-tool, 2 7/8" x 2 3/8" X-over, 2 7/8" x 6' handling sub, cup type SN and 160 jts of 2 7/8" L-80 tubing to surface. Installed lower pig tail, landed tubing, nipple down BOP's, NU Wellehead. Started well at 16:30 hrs RDMOSU

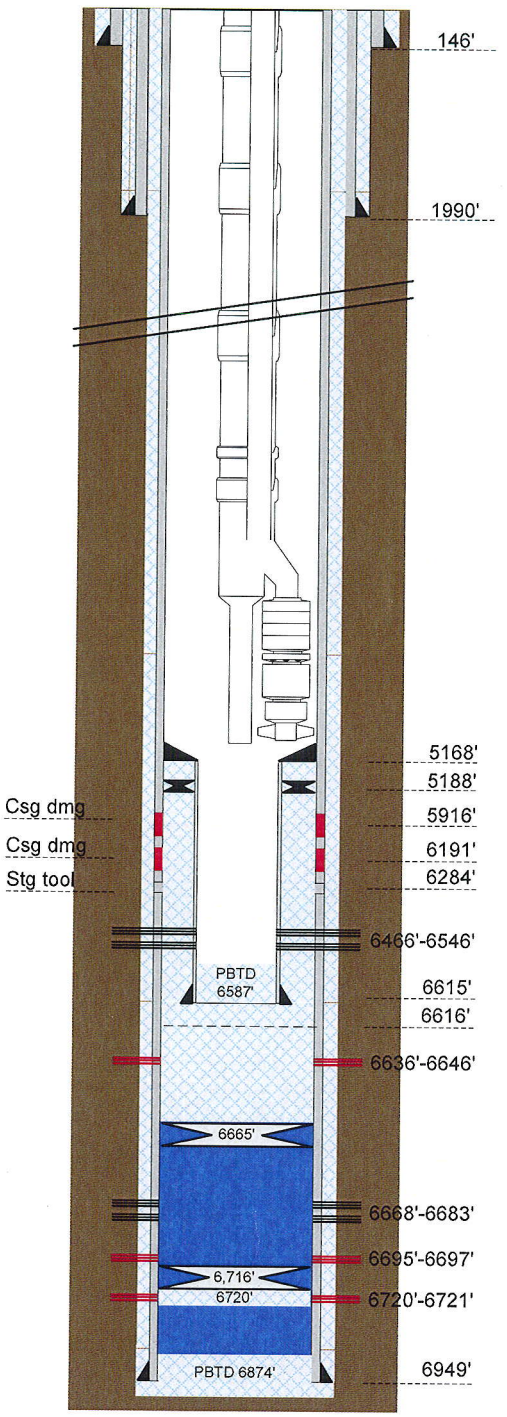
6/4/2011 Well production: 7.5 hrs, 120 oil, 111 water, 1493 BHP, 46 Hz, 48 Tub, 0 Casing.

Well production: 24 hrs, 781 oil, 40 water, 1567 BHP, 45 Hz, 87 Tub, 9 Casing.

Final Report

Wolverine State 17-10
API # 43-041-30054
Covenant Field
Section 20, T23S, R1W
Sevier County, Utah

Ground Elevation: 5,866'
KB Elevation: 5,892'



TD = 6950' MD (6745' TVD)

(Not to Scale)

Deviated Well

Surface:	143' FNL 2112' FWL, NE NW, 20-23S-1W
Top of Pay (6360' MD):	799' FSL, 1830' FEL, SW SE, 17-23S-1W
Total Depth (6950' MD):	799' FSL, 1830' FEL, SW SE, 17-23S-1W

Conductor Casing (06/23/08)
Size: 20", 0.25" wall
Depth Landed: 146' KB
Cement Data: Cemented to surface with 150 sacks

Surface Casing (1/2/09)
Size/Wt/Grade: 9-5/8", 36#, J-55, STC, 8rd
Depth Landed: 1990' KB
Cement Data: 355 sks VeriCem (11.0 ppg, 3.48 cf/sk), 350 sks Premium G (15.8 ppg, 1.17 cf/sk)

Production Casing (1/15/09)
Size/Wt/Grade: 7", 26.0#, N-80/HCL-80, LTC, 8rd
Properties: 7240 psi burst, 6.151" drift, 6.276" ID, 0.0382 Bbl/ft capacity
Depth Landed: 6949' KB
Stage Collar: 6284' KB
Cement Data: Stage 1 - 100 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)
Stage 2 Lead - 100 sks Varicem (11.0 ppg, 3.53 cf/sk)
Tail - 400 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

Casing liner (5/17/11)
Size/Wt/Grade: 4 ½" 11.6#, P-110, LTC 8rd
Properties: 10,690 psi burst, 3.875" drift, 4.0" ID, 0.01554 Bbl/ft capacity
Depth Landed: 6617' KB
Cement Data: 128 sks Mountain G (15.8 ppg, 1.15 cf/sk)

Navajo Perforations
6493' - 6516' MD (6288' - 6311' TVD), 23' 138 holes (06/01/11)
6528' - 6546' MD (6323' - 6341' TVD), 18' 108 holes (05/19/11)

Mid-Perf = 6519' MD (6314 TVD), 41.0' M (41.0' TV), 246 holes

6636'- 6646' MD (6431'- 6441' TVD), 10', 60 holes (3/18/09) - Squeezed
6668'- 6673' MD (6463'- 6468' TVD), 5', 30 holes (3/17/09) - Plugged back
6677'- 6683' MD (6472'- 6478' TVD), 6', 36 holes (3/17/09) - Plugged back
6695'- 6697' MD (6490'- 6492' TVD), 4', 6 holes (3/10/09) - Squeezed
6720'- 6721' MD (6515'- 6516' TVD), 1', 6 holes (3/13/09) - Squeezed

PBTD
(5/18/11) 6587' (Wireline tag)
(3/20/09) 6665' (cement on top of CIBP at 6664')
(3/13/09) 6716' (wireline set CICR)
(3/08/09) 6866' (CBL tag)
(1/15/09) 6874' (float collar depth)

TEC 6/23/11

Wolverine State 17-10
API # 43-041-30054
Covenant Field
Section 20, T23S, R1W
Sevier County, Utah

Tubing Detail (6/3/11)

	26.00	KB
	-3.00	Landed above GL
160	5023.47	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.10	Cup type SN - 2-7/8", EUE, 8rd, 2.25" ID cup type (5036' MD, 4871' TVD)
1	6.20	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	0.75	X-over, 2-7/8" x 2-3/8", EUE, 8rd
1	2.53	2" x 1 ½" Y-tool
1	8.0	2 3/8", 4.7#, L-80 EUE 8rd
1	14.98	Pump w/ Intake – Centrilift P18, Model 400PSSD, 80 stg, 4.00' OD (5070' MD, 4904' TVD)
1	6.10	Seal – Model FSB3DB H6 FER SSCV SB/SB PFSA HL 4.00" OD
1	9.68	Motor – Centrilift 450 MSP 63 HP 4.50" OD
1	4.16	Downhole pressure sensor, Centinel III, 3.75" OD (5086' MD, 4919' TVD)
1	1.09	Centralizer, 2-3/8" x 5 ½", collapsible.
	-10.00	Wireline correction
	5091.06'	EOT (5091' MD, 4924' TVD)

Note: No check valve in this well.
Y-Tool fish 5/8"
Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

Directional Data:

MD	TVD	Incl.	MD	TVD	Incl.
500	500	0.8	3500	3409	18.0
750	750	0.7	4000	3884	17.9
1000	1000	2.9	4500	4360	17.5
1250	1249	6.8	5000	4837	17.6
1500	1496	9.9	5500	5313	17.8
2000	1980	17.0	6000	5796	9.2
2500	2456	17.9	6500	6295	0.1
3000	2933	17.9	6950	6745	0.1

Stimulation:

05/23/11: 6528'-6546' w/ 2000 gallons 7-½% FE HCL acid and 100 balls @ 4 BPM ATP = 3200 psi
FTP = 2850 psi

06/01/11: 6493'-6516' w/ 2500 gallons 7-½% FE HCL acid and 120 balls @ 5 BPM ATP = 3000 psi
FTP = 2750 psi

Wellhead Information:

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

Notes:

Surface Location: Latitude = 38° 47' 41.4845", Longitude = -111° 56' 02.3164" NAD 83
(4/3/09): Available Logs: DLL/MSFL, SDL/DSN, FWS, XRMI, CBL

TEC 6/23/11

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-46605

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7.UNIT or CA AGREEMENT NAME: WOLVERINE

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: WOLVERINE ST 17-10

2. NAME OF OPERATOR: WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

9. API NUMBER: 43041300540000

3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503

PHONE NUMBER: 616 458-1150 Ext

9. FIELD and POOL or WILDCAT: COVENANT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0143 FNL 2112 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 20 Township: 23.0S Range: 01.0W Meridian: S

COUNTY: SEVIER

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 4/1/2014	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Workover

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Wolverine Gas and Oil Co. of Utah, LLC intends to workover the Wolverine State 17-10 to acid stimulate existing Navajo perforations (from 6493'-6546') and recomplete additional Navajo pay intervals uphole, as follows: 6365'-68', 6379'-81', 6385'-95', 6404'-06', 6414'-17', 6419'-21', 6430'-34', 6454'-59', 6466'-70', and 6476'-78' (total 37' of new perforations). After similarly acidizing these new perforations, an ESP will be run and the well will be returned to production. A follow-up summary of well work activities will be filed after the work has been completed.

Approved by the Utah Division of Oil, Gas and Mining

Date: March 03, 2014

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Helene Bardolph	616 458-1150	Engineering Administrative Assistant
SIGNATURE N/A		**DATE** 2/26/2014

RECEIVED: Feb. 26, 2014

WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC

Energy Exploration in Partnership with the Environment

RECEIVED
JUN 05 2014
DIV. OF OIL, GAS & MINING

May 28, 2014

Mr. Stan Anderson
Fluid Minerals Group, BLM
Richfield Field Office
150 East 900 North
Richfield, UT 84701

Mr. Brad Hill
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84116

20 23S 1W

Re: Subsequent Report Sundries for Wolverine State 17-10 (API No. 43-041-30054) and 20-3 (API No. 43-041-30055), Covenant Field, Sevier County, Utah

Gentlemen:

Please find enclosed the required Sundry Notices for recently completed well work at the above-captioned wells, with appropriate additional copies. Both of the subject wells are operated by Wolverine Gas & Oil Company of Utah, LLC and were recently worked over, in an attempt to increase oil production. Feel free to contact me if you have questions or concerns about either the work performed or the information in these post-work filings. I can be reached at my office at 616-929-1932 on weekdays, from 7:30 am to 4:30 PM (EST).

Sincerely,

Ron Meredith,
Sr. Production Engineer
Wolverine Gas & Oil Corporation

RECEIVED
JUN 05 2014
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
8. WELL NAME and NUMBER: Wolverine State 17-10
9. API NUMBER: 4304130054
10. FIELD AND POOL, OR WILDCAT: Covenant Field

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER
2. NAME OF OPERATOR: Wolverine Gas & Oil Company of Utah, LLC
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Carr CITY Grand Rapids STATE MI ZIP 49503 PHONE NUMBER: (616) 458-1150
4. LOCATION OF WELL
FOOTAGES AT SURFACE: 143' FNL 2112' FWL COUNTY: Sevier
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23 1W S STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☑ ACIDIZE	☐ DEEPEN	☑ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 5/17/2014	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Wolverine completed a workover on the Wolverine State 17-10 on May 17, 2014. Existing perforations from 6493'-6546' were treated with 4100 gals of 7-1/2% foamed acid (from 60Q to 70Q) and 146 biodegradable perf balls. Foamed acid was pumped at a maximum surface pressure of 3800 psi and an average surface pressure of 2891 psi. After flushing with 70,000 scf of nitrogen, the well was SI. Subsequent flowing/swabbing recovered the entire load volume.

Subsequently, an RBP was set at 6485' and additional Navajo pay was perforated (with 3-1/8", 6 SPF, 21 gm charges) as follows: 6365'-6368', 6379'-6381', 6385'-6395', 6404'-6406', 6414'-6417', 6419'-6421', 6430'-6434', 6454'-6459', 6466'-6470', and 6476'-6478'. The new perforations (6365'-6478') were then treated with 3800 gals of 7-1/2% foamed acid (from 60Q to 70Q) and 155 biodegradable perf balls. Foamed acid was pumped at a maximum surface pressure of 4497 psi and an average surface pressure of 3582 psi. After flushing with 70,000 scf of nitrogen, the well was SI. Subsequent flowing/swabbing recovered the entire load volume. The well was returned to production at an initial rate of 166 BO and 218 BW per day.

(See the attached WBD and Daily Reports for additional details.)

NAME (PLEASE PRINT) Ron Meredith TITLE Sr. Production Engineer

SIGNATURE [signature] DATE 5/28/2014

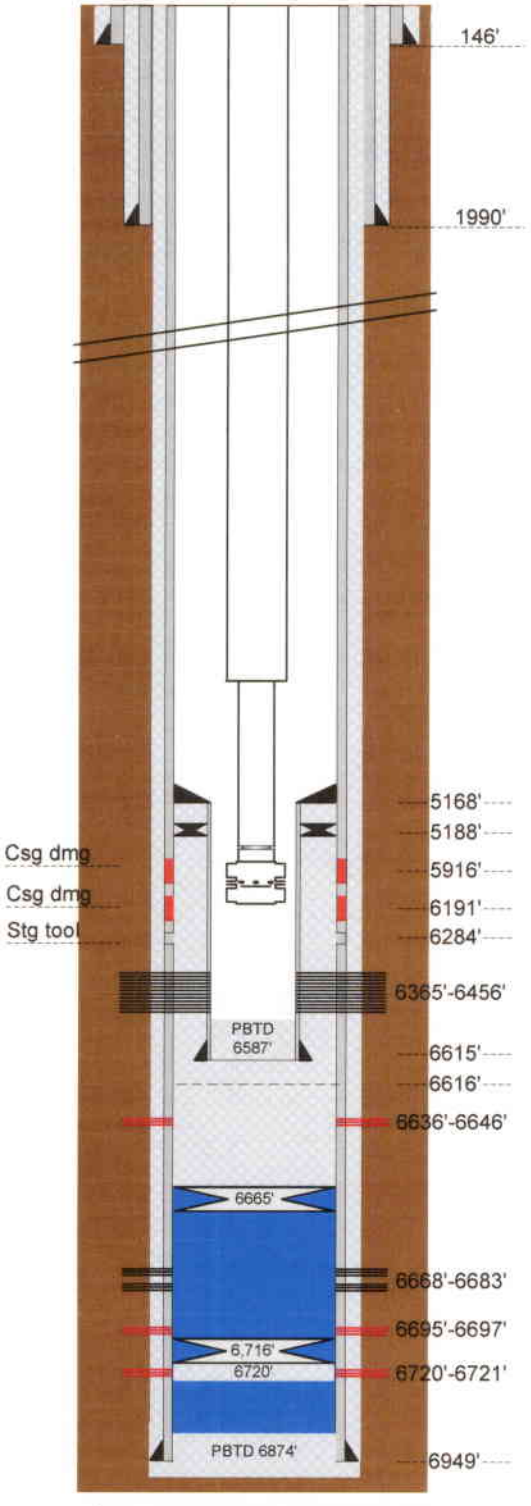
(This space for State use only)

RECEIVED
JUN 05 2014
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

Wolverine State 17-10
API # 43-041-30054
Covenant Field
Section 20, T23S, R1W
Sevier County, Utah

Ground Elevation: 5,866'
KB Elevation: 5,892'



TD = 6950' MD (6745' TVD)

(Not to Scale)

Deviated Well

Surface:	143' FNL 2112' FWL, NE NW, 20-23S-1W
Top of Pay (6360' MD):	799' FSL, 1830' FEL, SW SE, 17-23S-1W
Total Depth (6950' MD):	799' FSL, 1830' FEL, SW SE, 17-23S-1W

Conductor Casing (06/23/08)
Size: 20", 0.25" wall
Depth Landed: 146' KB
Cement Data: Cemented to surface with 150 sacks

Surface Casing (1/2/09)
Size/Wt/Grade: 9-5/8", 36#, J-55, STC, 8rd
Depth Landed: 1990' KB
Cement Data: 355 sks VeriCem (11.0 ppg, 3.48 cf/sk), 350 sks Premium G (15.8 ppg, 1.17 cf/sk)

Production Casing (1/15/09)
Size/Wt/Grade: 7", 26.0#, N-80/HCL-80, LTC, 8rd
Properties: 7240 psi burst, 6.151" drift, 6.276" ID, 0.0382 Bbl/ft capacity
Depth Landed: 6949' KB
Stage Collar: 6284' KB
Cement Data: Stage 1 - 100 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)
Stage 2 Lead - 100 sks Varicem (11.0 ppg, 3.53 cf/sk)
Tail - 400 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

Casing liner (5/17/11)
Size/Wt/Grade: 4 ½" 11.6#, P-110, LTC 8rd
Properties: 10,690 psi burst, 3.875" drift, 4.0" ID, 0.01554 Bbl/ft capacity
Depth Landed: 6617' KB
Cement Data: 128 sks Mountain G (15.8 ppg, 1.15 cf/sk)

White Throne Perforations
6365' - 6368' MD (6160' - 6163' TVD), 03' 018 holes (05/09/14)
6379' - 6381' MD (6174' - 6176' TVD), 02' 012 holes (05/09/14)
6385' - 6395' MD (6180' - 6190' TVD), 10' 060 holes (05/09/14)
6404' - 6406' MD (6199' - 6201' TVD), 02' 012 holes (05/09/14)
6414' - 6417' MD (6209' - 6212' TVD), 03' 018 holes (05/09/14)
6419' - 6421' MD (6214' - 6216' TVD), 02' 012 holes (05/09/14)
6430' - 6434' MD (6225' - 6229' TVD), 04' 024 holes (05/09/14)
6454' - 6459' MD (6249' - 6254' TVD), 05' 030 holes (05/09/14)
6466' - 6470' MD (6261' - 6265' TVD), 04' 024 holes (05/09/14)
6476' - 6478' MD (6271' - 6273' TVD), 02' 012 holes (05/09/14)
6493' - 6516' MD (6288' - 6311' TVD), 23' 138 holes (06/01/11)
6528' - 6546' MD (6323' - 6341' TVD), 18' 108 holes (05/19/11)

Mid-Perf = 6456' MD (6251' TVD), 78.0', 468 holes

6636'- 6646' MD (6431'- 6441' TVD), 10', 60 holes (3/18/09) - Squeezed
6668'- 6673' MD (6463'- 6468' TVD), 05', 30 holes (3/17/09) - Plugged back
6677'- 6683' MD (6472'- 6478' TVD), 06', 36 holes (3/17/09) - Plugged back
6695'- 6697' MD (6490'- 6492' TVD), 04', 06 holes (3/10/09) - Squeezed
6720'- 6721' MD (6515'- 6516' TVD), 01', 06 holes (3/13/09) - Squeezed

TEC 5/17/14

Wolverine State 17-10
API # 43-041-30054
Covenant Field
Section 20, T23S, R1W
Sevier County, Utah

Tubing (5/17/14)

End of BHA	6189' WLM (5984' TVD)
Centinel	6185' WLM (5980' TVD)
Pump intake	6158' WLM (5953' TVD)
Seating Nipple	6058' WLM (5853' TVD)

PBTD

(5/18/11) 6587' (Wireline tag)
(3/20/09) 6665' (cement on top of CIBP at 6664')
(3/13/09) 6716' (wireline set CICR)
(3/08/09) 6866' (CBL tag)
(1/15/09) 6874' (float collar depth)

Tubing Detail (5/17/14)

	26.00	KB
	-3.00	Landed above GL
22	693.39	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd (Inspected blue band tubing)
128	4027.44	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd (Tubing pulled from well)
1	0.75	2-3/8" x 2-7/8" XO
9	279.96	Tubing - 2-3/8", 4.7#, L-80, EUE, 8rd (New tubing)
33	1043.12	Tubing - 2-3/8", 4.7#, J-55, EUE, 8rd (New tubing)
1	1.10	Cup Type SN
2	63.24	Tubing - 2-3/8", 4.7#, J-55, EUE, 8rd (New tubing)
1	8.0	Tubing - 2-3/8", 4.7#, J-55, EUE, 8rd
1	0.50	Pump Discharge
1	13.90	Pump
1	13.90	Pump
1	0.80	Pump Intake
1	6.10	Seal
1	19.80	Motor
1	4.10	Centinel
	-10.00	Wireline correction
	6189.10'	EOT (6189' MD, 5984' TVD)

Note: No check valve in this well.

Directional Data:

MD	TVD	Incl.	MD	TVD	Incl.
500	500	0.8	3500	3409	18.0
750	750	0.7	4000	3884	17.9
1000	1000	2.9	4500	4360	17.5
1250	1249	6.8	5000	4837	17.6
1500	1496	9.9	5500	5313	17.8
2000	1980	17.0	6000	5796	9.2
2500	2456	17.9	6500	6295	0.1
3000	2933	17.9	6950	6745	0.1

Covenant Field		SHL NE/NW Sec 20, T23S, R1W
WS 17-10		BHL SW/SE Sec 17, T23S, R1W
API# 43-041-30054		Sevier County, Utah

5/5/2014 MIRUSU, ND wellhead, NU BOP's. Pulled out of the hole with ESP equipment. Picked up and tripped in the hole with 6⅛" bit, 7" casing scraper and 167 joints of 2⅞" P-110 8rd tubing to the liner top at 5168'. Pulled out of the hole laying down the bit and scraper. Picked up 3⅞" bit, 4½" casing scraper, 47 joints of 2⅜" P-110 tubing, XO and 166 joints of 2⅞" tubing to PBTD at 6587'. SWIFN

5/6/2014 Opened well. RU pump lines and reverse circulated hole clean with completion fluid. RD pump lines and tripped out of the hole laying down the bit and casing scraper. Picked up and tripped in the hole with 4½" HD packer, 1 joint 2-⅜" P-110 tubing, cup type SN, 46 joints of 2-⅜" P-110 tubing, XO and 161 joints of 2-⅞" P-110 tubing to surface. Rigged up Halliburton acid equipment and pickled the tubing with 500 gallons of 7.5% Acid. Set the packer at 6447' and opened the by-pass.

1. Pumped 500 gallons of 7½% Acid.
2. Shut down, closed packer by-pass.
3. Pumped 1200 gallons of 60Q foamed 7½% acid @ 1 bpm, w/ 1 biodegradeable perf ball per 20 gallons acid.
4. Pumped 1200 gallons of 65Q foamed 7½% acid @ 0.7 bpm, w/ 1 biodegradeable perf ball per 20 gallons acid.
5. Pumped 1200 gallons of 70Q foamed 7½% acid @ 0.5 bpm (no perf balls in this stage).
6. Shut down
7. Flushed the tubing w/ ± 70,000 ft^3 of straight N_2 and shut down.

Note: Avg. surface rate was 0.8 bpm & 2102 scf/m @ 2891 psi WHP. Max treating Pressure - 3800 psi.
Pumped N_2 Volume = 312139 scf Total Perf balls dropped - 146

5/7/2014 Well flowed 60 bbls of fluid overnight. RU swab equipment, made two swab runs and well started flowing again. Flowed another 50 bbls of fluid in three hours then laid dead. Continued to swab, making 12 runs and recovering 82 bbls. Total fluid recovered since pumping acid is 192 bbls (Acid volume +117 bbls).

5/8/2014 Opened well & RU swab equipment. Swabbed another 185 bbls. Total fluid recovered since pumping acid is 377 bbls (Acid volume +302 bbls). RD swab equipment and TOH with tubing and packer. SWIFN.

5/9/2014 Opened well. Picked up and tripped in the hole with 4½" 11.6# RBP to 6485'. RU wireline unit and correlated plug setting depth. Set RBP at 6485' & RD wireline unit. Pulled out of the hole with tubing and retrieving head. RU wireline unit and perforated as follows (6 SPF, 60° phasing):

6365' – 6368' MD (6160' – 6163' TVD), 03', 18 holes
6379' – 6381' MD (6174' – 6176' TVD), 02', 12 holes
6385' – 6395' MD (6180' – 6190' TVD), 10', 60 holes
6404' – 6406' MD (6199' – 6201' TVD), 02', 12 holes
6414' – 6417' MD (6209' – 6212' TVD), 03', 18 holes
6419' – 6421' MD (6214' – 6216' TVD), 02', 12 holes
6430' – 6434' MD (6225' – 6229' TVD), 04', 24 holes
6454' – 6459' MD (6249' – 6254' TVD), 05', 30 holes
6466' – 6470' MD (6261' – 6265' TVD), 04', 24 holes
6476' – 6478' MD (6271' – 6273' TVD), 02', 12 holes

(Perforations were correlated to Halliburton log 01/12/19 SDL-DSN-GR)
RD and released wireline unit, picked up and tripped in the hole with retrieving head, 1-joint 2⅜ tubing, HD packer, 1-joint 2⅜" tubing, cup type SN and 203 joints of tubing to surface. Set packer at 6327', SWIFN.

5/10/2014 Opened well. RU Halliburton acid equipment and pumped foam acid job as follows:

1. Pumped 500 gallons 7½% acid
2. Shut down, closed packer by-pass.
3. Pumped 1100 gallons of 60Q foamed 7½% acid @ 1 bpm, w/ 1 biodegradeable perf ball per 20 gallons acid.
4. Pumped 495 gallons of 65Q foamed 7½% acid @ 1 bpm, w/ 1 biodegradeable perf ball per 20 gallons acid.
5. Pumped 605 gallons of 65Q foamed 7½% acid @ 1 bpm, w/ 1 biodegradeable perf ball per 20 gallons acid.
6. Pumped 714 gallons of 70Q foamed 7½% acid @ 0.9 bpm, w/ 1 biodegradeable perf ball per 20 gallons acid.

7. Pumped 386 gallons of 70Q foamed 7½% acid @ 0.9 bpm, w/ 1 biodegradeable perf ball per 20 gallons acid in the first 186 gallons of this stage(did not drop any per balls for the remaining 200 gallons).
8. Flushed the tubing w/ ± 70,000 ft^3 of straight N_2 and shut down (ISIP 4253 psi).

Note: Avg. surface rate was 0.9 bpm & 4592 scf/m @ 3582 psi WHP. Max treating Pressure - 4497 psi.
Pumped N_2 Volume = 349055 scf Total Perf balls dropped - 155

RD and released Halliburton acid equipment. Hooked up lines and opened well to flowback to frac tank.

5/11/2014 Well flowed back 57 bbls of fluid overnight. RU swab equipment and swabbed 192 bbls.

Note: Total fluid recovered from the well after pumping acid is 249 bbls (Acid volume +159 bbls)

5/12/2014 Opened well. Released packer and plug, set plug at 6560', set packer at 6327'. RU swab equipment and swabbed an additional 147 bbls. RD swab equipment and SWIFN

5/13/2014 Opened well to a frac tank and flowed back 35 bbls of fluid. Released packer and plug then pulled out of the hole laying down P-110 work string, packer and plug. SWIFN.

5/14-16/2014 Rig crew on standby

5/17/2014 Opened well. Hooked up a vac truck to the casing and rigged up cable spoolers. Picked up and TIH with Centinel, motor, seal, pump, 8' x 2-⅜" tubing sub, 2 joints 2-⅜" J-55 tubing, cup type SN, 33 joints 2-⅜" J-55 tubing, 9 joints 2-⅜" L-80 tubing, 2-⅞ x 2-⅜ XO, 129 joints 2-⅞ L-80 tubing that was pulled from the well, 23 joints 2-⅞" L-80 blue band tubing to surface.

Note: All of the 2-⅜" tubing is new
The top 33 joints of 2-⅞" tubing is inspected L-80 blue band
The pump, motor, seal, Centinel, and the motor lead are new.

5/17/2014 06 hr. production. 042 Oil, 140 Water, 1815 BHP

5/18/2014 24 hr. production. 166 Oil, 218 Water, 1410 BHP

Supervisor: Tony E. Cook Rig Operator: Austin Palmer